For the study of thesis entitled

A STUDY OF CUSTOMER RELATIONSHIP MARKETING PRACTICES (CRMP) OF INDIAN OIL CORPORATION(IOC)

For award of the degree of

DOCTOR OF PHILOSOPHY

IN

COMMERCE

SUBMITTED BY:

MOHD JAVED KHAN

ABSTRACT

The last decade has seen the emergence of Customer Relationship Management (CRM) as a technique to underpin organizational performance improvement in improving customer retention, customer satisfaction, and customer value. However, evidence suggests that many CRM initiatives fail to achieve desired results.

Furthermore, empirical research is still scarce. In recent years, CRM has been the favored theme for numerous studies and reports. It has also been considered as a way of capturing comparative advantages in the face of the growing competition.

However, despite many studies conducted on CRM in various industries in the past 20 years, there is still significant disagreement about its definition and meaning, and the framework for the effective implementation and evaluation of CRM practice. Customer relationship management (CRM) has once again gained prominence amongst academics and practitioners. However, there is a tremendous amount of confusion regarding its domain and meaning. In this study, the authors explore the conceptual foundations of CRM by examining the literature on relationship marketing and other disciplines that contribute to the knowledge of CRM. A CRM process framework is proposed that builds on other relationship development process models.

The concept of CRM is premised on a simple logic of business- it must keep tracking customers once attracted; retain them in business portfolio; and, profit from their growth. Maintaining relationships with customers and offering them complete customer satisfaction seems to be the foremost agenda on the minds of petroleum companies these days. Customer Relationship Management (CRM) seems to offer the much needed strategy and solution to keep customers happy, smiling and connected with the organization across their lifetime. CRM has multiple facets and implications for the petroleum companies who always seem to be eager to go that extra mile in order to be able to retain their customer base, prevent cannibalization from competitors and for keeping their loyal customers coming back to them for more. The authors have studied two cases of competing petroleum companies in India and the effect of implementation of CRM strategy and practices. It was observed that customer satisfaction increased with the successful implementation of CRM practices across the organization.

Today in the highly competitive market, increasing customer demands retail outlets realize the importance of customer relationship management. The lack of understanding on Customer Relationship Management (CRM) is always a concern among the service providers especially retail outlets, retailers have their own way of managing their relationships with the customers.

Customer Relation Marketing in the Petroleum industries in India has passed through many stages and made various strides to enhance its operations so

that members and the general public are benefiting from in a broad perspective. Although the government has been involved in streamlining the Customer Relation Marketing in the petroleum industry, it is marred by inefficiencies. Based on this concern, the study meant to establish the factors affecting effective distribution of petroleum products in India with reference to Indian Oil Corporation.

Two key objectives motivate the GoI's policy in India's downstream petroleum sector:

(a) Ensuring India's growing refined product demand is met at affordable prices over time; and (b) establishing India as a major global refined product exporter. Aside from its fiscal implications, India's current petroleum product pricing regime has implications for the achievement of these goals, and for the emergence of timely refining investments that are crucial to their achievement.

The study used both primary and secondary data as its source and semi structured questionnaires as the main instrument of data collection. The collected data will be edited for analysis. In depth open-ended questions were used to collect the data. The analysis of the data gathered went through two main stages. The first stage was to transcribe the data collected from all the organizations chosen and produce detailed write-ups for each case. In every case the write-ups were similarly structured to help the researcher in the second stage, the cross-case analysis. The cross-case analysis was based on the researcher's proposed conceptual CRM model.

Our approach was basically descriptive in nature. Available time-series data on relevant variables were critically examined to ascertain the economic implications of the various petroleum policies. Our findings reveal three major economic implications: first is observed rapid expansion of the number of economic actors in the Indian petroleum industry; secondly, we observed rapid development of the transport system; and, thirdly, there were improvements in the gross domestic product (GDP), foreign direct investment, and employment levels.

Analysis is conducted to examine the impacts of CRM on innovation process. The statistical results indicate that not all CRM activities make contributions to each stage within innovation process. It is found that 1) information sharing effectively enhances both innovation throughput and innovation output. 2) Customer involvement and joint problem-solving exert positive influence on innovation throughput stage, while long-term partnership has significant effects on innovation output. 3) CRM activities have no impact on innovation initiation and input. 4) Technology-based CRM is the least effective mechanism during the innovation process.

OBJECTIVE OF THE STUDY

The point of this study is to illuminate the examination system important to this study, which is the purpose for the achievement or disappointment of CRM

activities in diverse organizations from the management viewpoint, with the aim to study organizations in diverse industries and distinctive nations.

CRM, as a rising control, is in extraordinary need of hypothetical help. Directing hypotheses and models are in short supply in the field, most likely because of the truth that it is another range for examination and due to its trade with IT and data systems, which have been quickly creating. The focal examination question for this study is: Why and how do CRM activities succeed then again fall flat? Inquire about around there will help building flourishing customer relationships what's more long haul corporate survival. Furthermore, discriminating achievement elements for CRM activities are to be drawn from the exploration discoveries.

The aims and objectives will be researched in the Indian Petroleum Corporate Sector, which are Indian Oil, Bharat Petroleum and Hindustan Petroleum Corporation Limited, IBP Company Limited, MRPL, BRPL, AOD all Government of India Enterprise under the nomenclature of Public Sector Oil Companies. In order to arrive at an empirical outcome of the study, the data collected from the customers impacting the Customer relationships between the company and customers shall be analyzed, which was collected from the Sample data collected directly from the customers in the National Capital Region (NCR). Data has been taken from company's internal records, from Government of India records and also from sources, which from petroleum company point of view were authenticate and relevant. The basic aim of the research is to

understand the significance of CRM for the chosen corporate and its relevance in current business strategic context. From the collected data, it was seen whether business performance could be enhanced using CRM practices in this organization. In order to empirically prove that the business performance is enhanced: the company's secondary data has been used.

RESEARCH HYPOTHESIS

The research theories were defined concerning the particular relationships in the theoretical structure. These relationships between the variables are the significant concerns of the study. The study is principally focused around the commence that the services by the oil organizations are the -free variable- and fulfillment of the customers at the retail outlet in different company is the ward variable.

Fulfillment of the customers is free variable, which is affected by the components influencing their relationship with the company. The execution of the company under study is the ward variable. In the study, to land at the uniform base of the execution of the oil organizations, sales and profit before premium and expenses, Sales Volume and Market Share. The dependendent variables as characterized in the study are autonomous of one another. The speculations as specified below are intelligent of this reason and are tested in point of interest in the ensuing chapters.

The researcher suggest that performance and productivity of service station is related to different potential variables: the owner/managers, the station, location and the competition-/competitors.

H1: A manager/owner becomes a dealer service station years of experience before are positively correlated with performance and labor productivity.

H2: Build-up area (size) in square feet of the service stations is positively correlated with service stations performance and labor productivity.

H3: There is a positive relationship between performance and labor productivity and inventory of non-fuel products in the service station.

H4: The number of islands is positively correlated with service stations performance and labor productivity.

H5: The traffic density where the service stations situated will be positively correlated with service stations performance and labour productivity.

H6: There is a positive relationship between service station location and performance and labour productivity.

THE QUESTIONNAIRE

One of the prerequisite to design a good questionnaire is deciding what is to be measured. There are basically various approaches to developing initial indicators in questionnaire design. These are -

1. Using observation or unstructured interview.

2. The Customer Profile.

3. The factor important in the Fuel buying process.

4. The demographic profile.

Questionnaire items for this research were initially developed based on measures developed in previous researches made by researchers. The final version of the questionnaire items however were modified to fit this particular context of research and thus they had gone through pilot testing and evaluation.

On the other hand, before the questionnaires were developed, a series of personal interviews were conducted with oil company executives and academicians. Three criteria were applied in developing the questionnaires, included: 1) test administration between 10 to 15minutes, (2) elimination of variables with apparent low predictive value, and (3) a questionnaire easily understood by the service station managers or owners.

The questions have been kept to the minimum as possible, so that the respondents will not find it difficult and boring to answer all of them.

To increase reliability, the questionnaire was carefully developed through two pretests and checked twice by the supervisor. One of the major concerns of the study was response rate. From discussion of availability, response rate was satisfacted. On the other hand, the questionnaire length was limited to increase the response rate and at the end the trade-off was made.

The Pilot Study - every questionnaire should be pretested. For this reason, the primary pretesting was done.Thepreliminary questionnaire designed for the pilot test were sent personally to the various service stations at surrounding area.

The interview was conducted by using the structured questionnaire. In the testing, they were asked to responds to what they thought about the questions and the questionnaires a whole. Any difficulties such as problems of understanding the questions, prognosis of possible reactions to the questions and other suggestions for improvement found during the test was taken seriously and used them to modify the questionnaire.

BACKGROUND OF THE SAMPLE

Based on the research hypotheses, respondents from managers/owners of petroleum retailing industry were questioned with 30 questions to indicate

their performance and productivity in the industry and their opinions about the overall industry as a whole. For the analysis of control variables (mostly demographic), all respondents were asked to indicate their demographic profiles.

MULTIVARIATE CORRELATION AND REGRESSION ANALYSIS ON THE VARIABLES.

In order to explore the multivariate relationships between the performance measures and the surrogate variables, and to test hypotheses detailed in the research literature, the data were further subjected to multiple correlation and regression analysis. This statistical technique was chosen because it allows the association of each independent variable with the performance indicator to be examined while controlling for the effects of the other independent variables. The multivariate regression equations presented below were calculated using the 'stepwise method', and the technique starts by regressing the variables with highest correlation against the dependent variable. A new independent variable is added or deleted at each step in order that the null hypothesis of no explanation can be rejected. The stepwise method was chosen because it is more susceptible to sample-specific error than the regular multiple regression. It has greater potential for capitalization on change and it can produce results that are specific to the sample employed (Hall 1994)[1].

When a regression analysis was run for VOLITRE with 0.05 as the limit for variable inclusion, only five variables entered the equation. However, when the limit was relaxed to 0.10, there are six variables was entered the step-wise regression equation. The results also improve R^2 from 0.84 to 0.86 and reduce the standard error from 0.78 to 0.75. From this test and discussion in section 7.3.1 above, the 0.10 level of significance was the selected level for the inclusion of significant independent surrogate variables. Furthermore, this level of significance was chosen because this study used a small sample and the researcher was afraid that some of the important variables will be excluded if using the higher level of significance such as 0.01 or 0.05 level of significance (as shown from the test mentioned above). Moreover, a few retail researchers especially in petroleum retailing such as Ingene and Brown (1987) and Acar (1993) also used this level in their study.

ANALYSIS OF HYPOTHESES TESTING

The set of hypotheses concerning the impact of independent variables on performance in retailing. There are thirteen hypotheses already developed earlier. The hypotheses are divided into two groups: the internal environmental factors (manager and store) and the external environmental factors (location and competition). The former reflect the "controllable factors" and the latter include "uncontrollable factors". One of the purpose of an exploration study was to establish a basis for future rigorous hypothesis testing. Using these constructs, we developed other regression models to examine the impact of

internal and external environmental on performance. As mentioned earlier in this research, the first approach suggested byGhosh and Me Lafferty (1987) will be used in this section. The stepwise regression will be replaced by 2-stage regression in order to put all variables in one equation. The variables used in this section were selected by using judgment and management consideration and were found to be very important variables which impact on performance from the previous studies.

CONCLUSIONS

Refinery is an energy intensive industry, where electricity, steam, fuel oil & gas are used as the main sources of energy. Basic source of above forms of energy is hydrocarbon (petroleum oil) therefore optimization of energy is basically conservation of hydrocarbon, which in turn contributes in minimizing fuel and loss (OFL) and thereby improves profitability of the company. Most of energy optimization schemes need only systematic study and continuous effort of improvement without or with little cost involvement. Therefore it is recommended to implement energy optimization schemes in petroleum sectors in order to bring improvement in the profitability. Maximizing sells of products can increase profit; of course, the selling price must be higher

than the production costs. However maximizing capacity utilization of the plants can maximize volumes of products.

Energy companies will need to build sound investor and analyst relationships and convince capital markets that they have clear strategies to succeed if they wish to avoid lower share prices. Retailing activities will separate from back office service provision as well as from network service provision.

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CHAPTER – 1

INTRODUCTION

1.1 CUSTOMER RELATIONSHIP MANAGEMENT : BEING A NEW MARKETING STANDARD

Customers in the current period are a great deal more engaged today and selling to them obliges a far more key methodology which CRM would like to satisfy. Organizations are not just endeavoring to decipher the needs of the customers focused around their purchasing conduct, yet are additionally predicting their future needs.crm empowers firms to alter offerings for customers and when offerings are altered, the apparent quality gets upgraded. The apparent worth is compared with saw quality by customers, prompting upgrade of customer satisfaction. This stresses the need for incorporation along the quality chain and adjusting and incorporating hierarchical methodologies back through the supply chain to empower better esteem conveyance to the end customer.crm might be seen as an application of coordinated marketing and relationship marketing, reacting to an singular customer on the premise of what the customer says and what else is thought about that customer (Peppers, Rogers and Dorf, 1999)[1]. It is a management approach that empowers organizations to distinguish, pull in, and build maintenance of profitable customers by overseeing relationships with them and

[1] Peppers, Rogers and Dorf, (1999), "Is Your Company Ready for One-to-One Marketing"Harvard Business Review, 77, p.p 151–160.

further distinguishing deliberately critical customers (Buttle, F., 2001)[2]."CRM is an IT empowered business system, the conclusions of which upgrade gainfulness, revenue and customer satisfaction by arranging around customer segments fostering customer-fulfilling conduct and actualizing a customer-driven procedure" (Gartner group, 2008)[3]. Arrangement of motivating forces and measurements, organization of information management systems, tracking customer abandonment and maintenance levels and customer administration satisfaction levels are different commitments of CRM Technology.

Customer relationship management (CRM) has pulled in the stretched consideration of practitioners and researchers. More companies are receiving customer-driven methodologies, projects, tools, and technology for effective and compelling customer relationship management. They are understanding the requirement for top to bottom and coordinated customer learning in place to construct close agreeable and cooperating relationships with their customers.

The rise of new channels and advances is fundamentally modifying how companies interface with their customers, a development realizing a more prominent level of coordination between marketing, sales, and customer administration works in organizations. For practitioners, CRM speaks to an venture methodology to creating full-

[2] Buttle, F., (2001), "The CRM Value Chain," Marketing Business, p.p 52–55 Retrieved January 25, 2008.
[3] Gartner group., (2008), "Worldwide CRM Software Market to Grow 14% in 2008(online), Available at http://www.gartner.com/it/page.jsp?id=653307.

information about customer conduct and inclination and to creating projects and methodologies that empower customers to persistently improve their business relationship with the organization.

CRM could be seen in four main ways. Firstly, it is a contemporary reaction to the developing atmosphere of uncommon customer beat, disappearing brand loyalty and lower gainfulness (Cockburn, 2000)[4]. Furthermore, CRM is fundamental to the undertaking of making an association customer-driven. Thirdly, CRM is the surest symbol grasping data technology in business. Fourth lastly, CRM is the most certain approach to expansion quality to the customers and benefit to the polishing organizations (Reichheld, 1996)[5].

In a bigger number of routes than one, CRM speaks to a consistent end of the rationality that the business ought to be customer situated (Gamble, P., Merlin, S. and Neil W. 2000)[6]. It navigated a progressive strains of musings to reach what is presently seen as another business paradigm. For example, the early marketing paradigms common until the sixties, appointed advertisers to fulfill customer needs that were basically nature made. Later in the seventies, the marketing capacities served the Customers needs that were only 'particular answers for the needs and were the conclusion of the

[4]Cockburn, P. 2000, 'CRM for Profit', Telecommunications, Dedham, December, vol. 34 no. 12, pp. 89-92.
[5]Reichheld, F., 1996. The Loyalty Effect: the Hidden Force Behind Growth, Profits and Lasting Value. Harvard Business School Press, Boston.
[6]Gamble, P., Merlin, S. and Neil W. 2000, Up Close and Personal: Customer Relationship Marketing at Work, Kogan page, London.

marketing activities. Marketing contemplations of the eighties gave themselves to meet the higher, more way of life situated requests and desires of customers. These were the consequence of the then social and economic nature's domain.

The idea of Customer Relationship Management required some investment flourishing in India because of the immature nature of the Indian markets. India has generally been a merchant's business sector, with advertisers essentially been concerned with delivering enough, as there were sufficient purchasers. So mass creation and a decent conveyance system were sufficient in the 80's and 90's. On the other hand, today there is rivalry in every segment furthermore customers have a decision. The current situation is portrayed by an expanded rivalry among firms, a hefty portion of them working universally, as additionally by expanded media mess prompting an exceptionally progressive however expanding inadequacy of mass marketing. Companies have begun feeling the crunch. As of late, truly a couple of Indian companies have taken to Customer Relationship Management in some structure or an alternate, in spite of the fact that a considerable lot of these are in the services sector. The lodging business has generally been taking after Customer Relationship Management. Banking services and the retailing sector are different industries heading in the practice.

Customer Relationship Marketing has numerous ramifications for business arranging, employee training, advertising, promotion, public relations, direct marketing, package design, et cetera. Customer Relationship Marketing obliges us to refocus our consideration on the economic estimation of brands. CRM requests that we consider the cost of brand abuse versus the profits of brand building. The Customer Relationship Marketer's objective is to win and keep brand dependable customers. Building continuing, profitable, developing brands is about making, supporting, protecting and fortifying devoted brand relationships. Success, securing, and trial are critical for development. In any case, when studies demonstrate that it costs four to six times to the extent that get another customer as it does to keep a customer unwavering, we must concentrate on the new marketing basic. We must form brand loyalty.

The objective is not simply to draw in customers. It is to pull in and hold customer loyalty. The faithful customer is the most profitable customer, yet the center is still frequently just on drawing in new customers. Concentrating on customer procurement without giving careful consideration to reinforcing customer loyalty is restricted to develop sales, yet it is not the best approach to develop sales beneficially. The Brand Loyalty Marketer realizes that the true

objective must be to build sales volume and brand esteem in the meantime (Anton, John 1999)[7].

The term customer relationship management or CRM for brevity is presently among the more popular buzzwords of the Nineties. As a result, the concept means different things to different people. However all agree on one feature of CRM: it reflects "Ongoing relationships between businesses and their customers' in business (Sheth and Parvatiyar. 2000)[8]. (Agrawal, 2002)[9] conceptualized CRM as the technological face of the business processes aimed to establish enduring and mutually beneficial relationships to drive customer retention, value and profitability up.

Indeed, the building of strong customer relationships has been suggested as a means for gaining competitive advantage in marketing. In its core, CRM argues that customers vary in terms of profitability and any two customers representing same demographic segment may incur different cost and generate different revenue over time. Moreover, it is recognized that not all customers generate revenue streams and therefore efforts should be to upgrade low, medium profit customers into profitable customers. CRM recognizes this fact of marketing life and recommends that the firm should actively encourage relationships with profitable customers only and attempt to

[7]Anton, John 1999, Customer Relationship Management, Prentice Hall, Upper Saddle River, NJ.
[8]Sheth, .Iagdish N. and Atul Parvatiyar (2000), Handbook of Relationship Marketing, Thousand Oaks, CA: Sage Publications.
[9]Agrawal, M.L (2002), 'Customer relationship management (CRM) and corporate renaissance, 2002

terminate or outsource relationships with unprofitable customers (Reichheld, 1996)[10].

The CRM touches various areas of marketing and vital choices. Joining of a few different paradigms of marketing particularly around the subject of cooperation and collaboration in the middle of marketers and customers has just added to its unmistakable quality in the corporate world. As indicated by Parvatiyar and Sheth (2000), CRM alludes to 'an adroitly expansive sensation of business action where cooperation and collaboration with customers turn into the overwhelming standard of marketing practice and research'.

As building profitable customer relationships becomes basic motivation behind every venture, it obliges an all encompassing methodology to make it fruitful. CRM is quick rising an overwhelming viewpoint of marketing. It is contended as though CRM is the vital solution to modern business issues and can give readymade answers. Be that as it may, at its center, CRM includes rethinking the value offer to the customers, outlining and coordinating business processes around them, and implementing and monitoring projects for the total such that it makes a reasonable customer advantage (Agrawal, 2002). In the event that executed effectively CRM offers tremendous profits to the association in terms of enhanced sales, market share profitability,

[10]Reichheld, F.F. and Teal, T. (1996), The Loyalty Effect: The Hidden Force behind Growth, Profits, and Lasting Value, Harvard Business School Press, Boston, MA.

customer fulfillment and decreased customer turnover, service cost and time. Different terminologies, for example, relationship marketing, relationship management, customer management, CRM and soon have been utilized to portray the methodology or exercises went for building long term profitable relationships with customers. Levitt (1983) clarified that 'the relationship really heightens consequent to the deal and turns into the basic element in the purchaser's decision of the vender next time around' and the 'deal only consummates the courtship'. Then again, it should be known thusly how decently characterized the relationship has been, which thus relies on upon the cost of sales and the profitability of the goods sold.

The further rise of mutual beneficial relationship through relational exchange has been at the core of all CRM studies. Gronroos (1994)[11] defined relationship marketing as ‘a set of activities directed towards establishing, developing and enhancing customer relationships for mutual exchange and fulfillment of promises’. (Christopher et. al. 2002)[12] also echoed the same and defining that mutual exchange and fulfillment of promises trust and commitment, communication effectiveness and personalization are the integral elements in managing relationships (jain and jain, 2001)[13]. (Gruen et al,

[11]Groonroos, Christian 1994, "From Marketing Mix to Relationship Marketing: Towards a Paradigm Shift in Marketing' , Marketing Decision, 32(2),4-20.
[12]Christopher, M., Payne, A., & Ballantyne, D. (2002). Relationship marketing: Creating stakeholder value. Oxford: Butterworth Heinemann.
[13]Jain. R. & Jain S. 2001. Managing Relationships for Effective Supply Chain Management in P. Radhakrishnan, S.Palaniswami, P. V. Mohanram and J .Kanchana (Eds), Logistics and Supply Chain Management, New Delhi: Allied.

2000)[14]reported that interpersonal relationships between buyers and suppliers serve as switching barriers and prevent customer defection.

1.2 :CUSTOMER RELATIONSHIP MANAGEMENT AND MARKETING

Advertisers began the new thousand years in one of two groups: the individuals who practice Customer Relationship Marketing, and the individuals who don't. The individuals who do are redesigning their marketing projects to make and fortify brand loyalty. They put to the extent that on holding customers as they do on pulling in customers. These same advertisers are likewise deserting the idea that advertising's occupation closes with the deal, that its objective is to impact a few "uninvolved" at some money register. They perceive that the deal is the start of a chance to make a persisting, profitable brand relationship with the customer.

The individuals who don't practice Customer Relationship Marketing (CRM) might not need to—yet. Anyhow they will. They will in the event that they are to get by in this thousand years, on the off chance that they are to manage profitable development notwithstanding unavoidable losses from the marketing waves that went before CRM.

[14]Gruen, Thomas W., John O. Summers, and Frank Acito (2000), "Relationship Marketing Activities, Commitment, and Membership Behaviors in Professional Associations," Journal of Marketing, 64 (3), 34–49.

There are three such waves, which, all in all, have driven marketing since World War II.

- Mass marketing cultivated development through economies of scale and efficiencies of achieve, builds as old as the Industrial Revolution kept significant by the post-war blast in populace and continuous gains in optional pay. Mass items and services were mass showcased and mass disseminated to mass markets through mass advertising in mass media.

- Targeted marketing assumed control when mass advertisers understood that all customers are not made equivalent. Centered marketing headed to concentrated items and particular appropriation as well as to concentrated media, crowds and messages.

- Global marketing, which numerous advertisers utilization right up 'til today, is basically a mixture that takes the focused on methodology crosswise over geology rather than inside topography. To accomplish the economies of scale guaranteed by mass marketing, advertisers hunt down basic target markets worldwide. At the point when advertisers found, for instance, that adolescents in Melbourne, Munich, and Manhattan shared an incredible arrangement in like manner, this spoke to extraordinary open

doors for such global brands as Levi's, Coca-Cola, McDonald's, and Doc Martens.

The initial three marketing waves shared one thing in as a relatable point. They concentrated on boosting sales. The objectives were to expand sales in mass markets, focused on businesses or global markets. Advertisers are currently finding that it is lamentably conceivable to build sales without expanding benefits. In this way, now advertisers take a gander at quality of share, not simply amount of share. Their goal is continuing profitable development. The new marketing objective is to build sales and to expand benefits all the while. Advertisers are starting to admire that the premise for persisting profitable development is the creation and support of building customer relationships.[15]

In the marketing writing the terms customer relationship management and relationship marketing are utilized reciprocally and reflect a variety of subjects and viewpoints (Nevin, 1995)[16]. While subjects offer

[15] Slater, Stanley F. and John C. Narver, "Superior Customer Value and Business Performance: The Strong Evidence for a Market-Driven Culture," Marketing Science Institute, Cambridge, MA.
[16]Nevin John R. (1995), .'Relationship Marketing and Distribution Channels: Exploring Fundamental Issues," journal of the Academy Marketing Sciences, (Fall), pp. 327-334.

a limited functional marketing viewpoint, then again it offers a point of view that is wide and to some degree paradigmatic in methodology and introduction. One point of view of customer relationship management is database marketing underscoring on the special parts of marketing interfaced to database endeavors, yet, an alternate, however important, perspective is to consider CRM as customer retention in which a variety of in the wake of marketing strategies is utilized for customer holding or staying in touch after the deal is made (Vavra, 1992)[17]. On the other hand, in the continuum, one of the popular methodologies with late application of data innovation is to concentrate on individual or balanced relationship with customers that incorporate information base learning with the long-term customer retention and development Strategies. Relationship marketing is "an incorporated exertion to distinguish, keep up, and develop a network with individual buyers and to persistently fortify the network for the mutual profit of both sides, through intuitive, individualized and value-added contacts over a long time of time" (Shani and Chalasani, 1992)[18]. Applies the individual record idea in modern markets to recommend CRM to signify, "Marketing focused to solid, enduring relationships with individual records. In different business settings, have proposed comparative perspectives of customer relationship management.

[17]Vavra, Terry G. (1992), Aftermarketing: How to Keep Customers for Life through Relationship Marketing, Home.wood, IL: Business One-Irwin.

[18]Shani, D. and Chalasani, S. (1992), "Exploiting niches using relationship marketing", The Journal of Consumer Marketing, Vol. 9 No. 3, pp. 33-42.

(McKenna, 1991)[19]affirms a more key view by putting the customer first and moving the part of marketing from controlling the customer (telling and offering) to certified customer inclusion (conveying and imparting the information). (Berry, 1995)[20], in to some degree more extensive terms, additionally has a key perspective about CRM. He focuses on that pulling in new customers ought to be seen just as an intermediate venture in the marketing procedure. Creating closer relationship with these customers and transforming them into reliable ones are just as important parts of marketing. Therefore, he proposed relationship marketing as "drawing in, keeping up, and -in multi-service associations -improving customer relationships".

(Berry, 1983)[21]formally presented the term customer relationship management to the writing yet a few thoughts of relationship marketing had officially developed much prior. (McGarry, 1953)[22]incorporated six activities in the formal rundown of marketing functions contractual function; publicity function, promoting function, physical appropriation function, valuing function and termination function are symptomatic of the CRM. Arndt gave the following driving force to CRM who noted the propensity of organizations occupied with business-to-business marketing in creating long-Lasting relationships with their key customers and their key suppliers instead of

[19]McKenna, Regis (1991), Relationship Marketing: Successful Strategies for the Age of the Customers. Addison- Wesley Publishing Company.
[20]Berry, L. (1995), "Relationships marketing of services, growing interest, emerging perspectives", Journal of Academy of Marketing Science, Vol. 23 No. 4, pp. 236-45.
[21]Berry, L.L. 1983, Relationship Marketing, in Berry, L.L. Shostack. GL and Upha, GD (Eds), Emerging Perspectives in Service Marketing, American Marketing Association, Chicago, II, pp.- 25-8.
[22]McGarry, G. 1953, 'Some Viewpoints in Marketing', Journal of Marketing, 17(3), pp-36-43.

concentrating on discrete trade and termed this marvel as "tamed markets". The last push to CRM was given by none other than the modern defenders of profitable customer retention hypothesis who completed a study on customer retention and corporate profitability and unmistakably expressed that the part of customers is crucial for corporate execution and that when relationships with customers persevere, profits climb. Furthermore, (Sheth and Parvatiyar, 1995) demonstrated that the cost of holding current clients is oftentimes much lower than cost of obtaining new ones. In the same way, (Reichheld, 1993) inferred that financial profits of high loyalty are important, and in numerous industries they clarify the distinctions among organizations.

Lately, customer relationship management is constantly extended to incorporate a coordinated point of view on marketing, sales, customer service, channel management, logistics and innovation for taking part in customer fulfillment. Specialists are calling it customer relationship management (CRM) and are intrigued by all parts of collaborations with customers to keep up a long-term profitable relationship with them. They are extremely enthused about researching the projects, methodologies, processes and innovations that would be pertinent for compelling customer relationship management in the new millennium.

Customer Relationship Management is about pulling in, keeping up and improving customer relationships. It concentrates on the "lifetime

worth" of the customer rather than a single transaction. Customer Relationship Management is not an alternate sort of advertising model; it is an alternate sort of business model. It is about empowering the brand to utilize hard data to comprehend and aide the relationship that exists between the brand and its customers-both present and future. "A business relationship obliges ID of great customers, who need an equal relationship to make new esteem for common long haul profit. Customer Relationship Management is an on-going procedure of recognizing what's more making new esteem with individual customers, and after that sharing the profits over a lifetime of affiliation. It includes understanding, centering and management of on-going coordinated effort in the middle of suppliers and chose customers for shared quality creation also sharing through relationship and hierarchical arrangement."

Not at all like most advertising, CRM does not end with getting the potential customer prepared to purchase. It doesn't even end with the real deal. It goes past that to post-buy experience, customer maintenance, cross selling and that's only the tip of the iceberg. When a deal is made, companies ought not kick back and lose the chance of changing over a customer into a "customer forever". E.g. an organization agent may call a customer a prior week the warranty period is over and offer to redress any issues that may have sprung up. This is an open door not just to remind the customer that you

mind additionally to make referrals, repurchase or offer a related item/ administration.

Customer Relationship Management moves past customer satisfaction to "customer delight". On the off chance that a fly out office had the capacity offer a family an occasion to the correct spot, at the ideal time at the right cost. In the event that they could organize an additional couch for the 5-year old without being asked and even get a pizza conveyed at the doorstep when the gang returns from the occasion, excessively tired to cook. Simultaneously it would guarantee not just a deep rooted customer additionally a reliable representative.[23]

It ought to, notwithstanding, be remembered that CRM does not mean having a call focus just; it doesn't mean having simply a database of consumers for sending direct mail or making simply a social relationship with the shopper or so far as that is concerned having an everlasting value rebate methodology. For all these to bode well, suitable systems should likewise be set up.

1.3: MEANING OF CUSTOMER RELATIONSHIP MANAGEMENT AND ITS CAPABILITIES

Customer Relationship Marketing is the fourth noteworthy post-war wave. While advertisers have since a long time ago saw brands as

[23]Desatnick, Robert L. and Denis H. Detzel, Managing to Keep the Customer, Jossey-Bass, San Francisco, p. 8.

stakes, the true stake is brand loyalty. A brand is not an advantage. Brand loyalty is the benefit. Without the loyalty of its customers, a brand is just a trademark, an ownable, identifiable symbol with little esteem. With the loyalty of its customers, a brand is more than a trademark. A trademark recognizes an item, an administration, a corporation. A brand distinguishes a guarantee. A solid brand is a dependable, important, unique guarantee. It is more than a trademark. It is a trustmark of colossal quality. Making and expanding brand loyalty brings about a comparing increment in the estimation of the trustmark. [24]

The new attention on building brand loyalty is empowered by the way that it costs four-to-six times more to change over a customer than it does to hold one. One study, led by Jagdish N. Sheth, particularly inferred that it "costs five times to the extent that supplant an average customer as it does to take activities that would have kept the customer in the first place." After broad research, the Technical Assistance Research Programs Institute (TARP) of the White House Office of Consumer Affairs watched that it costs essentially more to draw in a customer than it does to hold one. Slater and Narver watched that "Customer loyalty is amazingly important on the grounds that keeping a customer costs just around one-fifth to the extent that pulling in another one."

[24]Band, W.A., Creating Value for Customers, John Wiley & Son, Toronto, pp. 11-12.

As Frederick F. Reichheld and W. Earl Sasser Jr. finish up in their historic point study, "Zero Defections: Quality Comes to Services," the expense of perpetually pursuing new customers as opposed to dealing with the loyalty of existing ones claims an overlooked however overpowering toll. "Customer surrenders have a shockingly effective effect on how the money adds up," the writers compose. Loyalty can have more to do with an organization's benefits than "scale, piece of the pie, unit costs, and numerous different elements typically connected with point of interest. As a customer's relationship with the organization stretches, benefits climb. Also not only a bit. Companies can support benefits by very nearly 100 percent by holding only 5 percent a greater amount of their customers".

The core theme of all CRM and relationship marketing perspectives is its focus on cooperative and collaborative relationship between the firm and its customers. have characterized such cooperative relationships as being interdependent and long-term orientated rather than being concerned with short-term discrete transactions. The long-term orientation is often emphasized because such relationships will be anchored on mutual gains and co-operation (Ganesan, 1994)[25].

Another important facet of CRM is “customer selectivity”. As several research studies have shown not all customers are equally profitable

[25]Ganeshan, Shankar 1994, 'Determination of Long- Term Orientation in Buyer-Seller Relationships', Journal of Marketing, 58 (April), pp-1-19.

for an individual company (Storbacka, 2000)[26]. The company therefore must be selective in tailors its program and marketing efforts by segmenting and selecting appropriate customers for individual marketing programs. CRM therefore is a comprehensive strategy and process of acquiring, retaining and partnering with selective customers to create superior value of the company and the Customer. The purpose of CRM is to improve marketing productivity. Marketing productivity is achieved by increasing marketing efficiency and by enhancing marketing effectiveness (Sheth and Sisodia, 1995). In CRM, marketing efficiency is achieved because cooperative and collaborative processes help in reducing transaction costs and overall development costs for the company, Two important processes of CRM include proactive customer business development and building partnering relationship with most important customers, These lead to superior mutual value creation. Various perspective of Defining CRM has been given in the literature.

As part of the Information Mechanism, CRM refers to a business strategy to select and manage customers to optimize long-term value. CRM requires a customer-centric business philosophy and culture to support effective marketing, sales, and service processes. CRM applications can enable effective Customer Relationship Management, provided that an enterprise has the right leadership, strategy, and

[26]Storbacka, Kaj (2000), "Customer Profitability: Analysis and Design Issues," in Handbook of Relationship Marketing, Jagdish N. Sheth and Atul Parvatiyar, Eds., Thousand Oaks, GA: Sage Publications, pp. 565-586.

culture. When organizations implements customer-centric business strategies; it involves redesigning of functional activities; which demands re-engineering of work processes; which is supported, not driven, by CRM technology. This reinforces the understanding that CRM is a "chain reaction" triggered by new strategic initiatives rather than something that can initiate at the work process, or at technology level. In terms of Technology, CRM refers to methodologies, software, and usually Internet capabilities that help an enterprise manage customer relationships in an organized way. For example, an enterprise might build a database about its customers that described relationships in sufficient detail. Therefore, management, salespeople, people providing service, and perhaps the customer directly could access information, match customer needs with product plans and offerings, remind customers of service requirements, and know what other products a customer had purchased. It is a "big picture" approach that integrates the sales, order fulfillment, and customer service, and co-ordinates and unifies all points of interaction with the customer, throughout the Customer Life Cycle (CLC). The technological solutions are built on a total knowledge of the customer, and require technologies capable of supporting all forms of customer contact. Arguably, CRM is a business strategy to get, grow, and retain the right customers, leading to long-term profitability and to optimize long-term value. CRM is essential to create a sustainable competitive advantage based on relationships, not just products. Therefore, CRM

requires a customer-centric business philosophy and culture to support effective marketing, sales, and service processes.

1.4 :CRM : A CONCEPTUAL BACKGROUND

Albeit marketing practices could be followed back the extent that 7000 B.c. (Carratu 1987)[27], marketing thought as a different control was a result of economics around the start of this century. As the control picked up force, and created through the initial seventy five percent of the twentieth century, the essential center was on transactions and trades. Then again, the development of marketing as a field of study and practice is experiencing a reconceptualization in its introduction from transactions to relationships (Kotler 1990)[28]. The accentuation on relationships instead of transaction based trades is prone to reclassify the domain of marketing (Sheth, Gardener and Garett 1988). In fact, the development of a relationship marketing school of thought is impending given the developing enthusiasm of marketing researchers in the social paradigm.

In this study, we watch, that the paradigm shift from transactions to relationships is connected with the return of direct marketing both in business-to-business and business-to- customer markets. As in the preindustrial time (described by direct marketing practices of agricultural and antique makers) at the end of the day direct

[27]Carratu, V. (1987) Commercial Counterfeiting, in Murphy, J. (Ed.), Branding: A Key Marketing Tool. The Macmillan Press Ltd., London.
[28] Kotler, P. (1990), Presentation at the Trustees Meeting of the Marketing Science Institute in November 1990, Boston.

marketing, yet in a distinctive structure, is getting to be well known, and thus so is the relationship introduction of advertisers. At the point when makers and consumers directly manage one another, there is a more noteworthy potential for enthusiastic holding that transcends economic trade. They can comprehend and admire each others' needs and requirements better, are more slanted to coordinate with each other, and therefore, get to be more relationship situated. This is in differentiation to the trade introduction of the brokers (sellers and purchasers). To the mediators, particularly the wholesalers, the economics of transactions are more vital, furthermore hence, they are less sincerely joined to items. To be sure, numerous brokers do not physically see, feel, touch items however just go about as executors and take title to the products for financing and danger sharing.

Similarly as with every new shift in the center of marketing, there are backers and commentators of the relationship center in marketing. Then again, in the same path as Kotler (1972, p. 46)[29] saw about different shifts in marketing, we accept that the rise of a relationship center will give an "invigorated and stretched self idea" to marketing. Our hopefulness comes from no less than four perceptions: (i) relationship marketing has gotten the extravagant of researchers in numerous parts of the world, including North America, Europe, Australia and Asia, as is obvious from the investment in a portion of

[29] Kotler, P. (1972), A Generic Concept of Marketing, Journal of Marketing, Vol. 36 April, pp. 46-54.

the late meetings hung on this subject (Sheth and Parvatiyar 1994); (ii) its degree is wide enough to cover the whole range of marketing's sub disciplines, including channels, business-to-business marketing, services marketing, marketing examination, customer conduct, marketing communication, marketing system, worldwide marketing and direct marketing; (iii) like different sciences, marketing is a developing order, and has created an arrangement of expansion, correction and overhauling its principal learning (Bass 1993); and (iv) researchers who at one time were heading advocates of the trade paradigm, for example, Bagozzi (1974)[30] and Kotler (1972), are presently charmed by the social parts of marketing (Bagozzi 1994; Kotler 1994)[31,32].

The Emergence of CRM Practice as observed by (Sheth and Parvatiyar, 1995b)[33], developing customer relationships has historical antecedents going back into the pre-industrial era, Much of it was due to direct interaction between producers of agricultural products and their consumers, Similarly artisans often developed customized products for each customer, Such direct interaction led to relational bonding between the producer and the consumer, It was only after industrial era's mass production society and the advent of middlemen

[30]Bagozzi, R. P. (1974) Marketing as an Organized Behavioral System of Exchanges, Journal of Marketing, Vol. 38, October, pp. 77-81.
[31]Bagozzi, R. P. (1994) Interactions In Small Groups: The Social Relations Model, in Sheth, J.N. and Parvatiyar, A. (Eds); Relationship Marketing: Theory, Methods and Applications, Center for Relationship Marketing, Emory University, Atlanta.
[32]Kotler, P. (1994), Marketing Management: Analysis, Planning, Implementation, and Control. Prentice-Hall, Inc., Englewood Cliffs, New Jersey.
[33]Sheth, Jagdish N. and Atul Parvatiyar (1995b), "The Evolution of Relationship Marketing," International Business Review, 4 (4), pp. 397-418.

that there were less frequent interactions between producers and consumers leading to transactions oriented marketing, The production and consumption functions got separated leading to marketing functions being performed by the middlemen. And middlemen are in general oriented towards economic aspects of buying since the largest cost is often the cost of goods sold.

In recent years however, a few components have helped the fast advancement and development of CRM. These incorporate the developing de-intermediation handle in numerous industries because of the appearance of complex machine and telecom innovations that allow makers to specifically interface with end-customers. In numerous industries, for example, carriers, banks, protection, machine program programming, or family apparatuses and even consumables, the de-intermediation procedure is quick changing the way of marketing and therefore making relationship marketing more popular. Databases and immediate marketing apparatuses provide for them the intends to individualize their marketing deliberations. Therefore, makers needn't bother with those functions in the past performed by the brokers. Indeed shoppers are eager to attempt a portion of the obligations of immediate requesting, individual marketing, and item utilize related services with little help structure the makers, The late achievement of on-line saving money, immediate offering of books, vehicles, protection, monetary markets, and so on.,

on the Internet all authenticate the developing shopper enthusiasm toward keeping up immediate relationship with marketers.

The de-intermediation process and resulting pervasiveness of CRM is additionally because of the development of the service economy. Since services are regularly delivered and conveyed at the same foundation, it minimizes the part of the brokers. A more noteworthy enthusiastic bond between the service supplier and the service client additionally creates the requirement for keeping up and upgrading the relationship. It is in this way not hard to see that CRM is important for researchers and professionals of services marketing (Bitner, 1995)[34].

An alternate energy driving the reception of CRM has been the change in quality and rise of numerous quality devices, for example, TQM, JIT, MRP, ISO, six sigma and so forth. At the point when organizations grasped Total Quality Management (TQM) rationality to enhance quality and diminish costs, it got to be important to include suppliers and customers in implementing the project at all levels of the value chain. This required close living up to expectations relationships with customers, suppliers, and different parts of the marketing framework. Along these lines, a few organizations, for example, Maruti, IBM, HP, General Motors, Honda and so forth., shaped cooperating relationships with suppliers and customers to practice TQM. Different

[34]Bitner, M.J. (1995), "Building service relationships: its all about promises", Journal of Academy of Marketing Science., Vol. 23 No. 4, pp. 246-51.

projects, for example, in the nick of time (JIT) supply and Material-asset arranging (MRP) likewise made the utilization of related relationships in the middle of suppliers and customers (Frazier, Spekman, and O'Neal, 1988)[35].

In the current era of hyper-competition, marketers are forced to be more concerned with customer retention and loyalty. As several studies have indicated, retaining customers is less expensive and perhaps a more sustainable competitive advantage than acquiring new ones. Marketers are realizing that it costs less to retain customers than to compete for new ones. On the supply side it pays more to develop closer relationships with a few suppliers than to develop more vendors. In addition, several marketers are also concerned with keeping customers for life, rather than making a one-time sale. There is greater opportunity for cross selling and up selling to a customer who is loyal and committed to the firm and its offerings (Naidu, et. al., 1999)[36] .

Also, customer expectations have rapidly changed over the last two decades. Fueled by new technology and growing availability of advanced product features and services, customer expectations are changing almost on a daily basis. Consumers are less willing to make compromises or trade-off in product and service quality. In the world

[35]Frazier, Gary L., Robert E. Spekman, and Charles O'Neal (1988), "Just-in-Time Exchange Systems and Industrial Marketing," journal/ of Marketing. 52 (October), pp. 52-67.
[36]Naidu G.M., Atul Parvatiyar, Jagdish N. Sheth and Lori Westgate (1999), "Does Relationship Marketing Pay? An Empirical Investigation of Relationship Marketing Practices in Hospitals," 46 (3), pp. 207-218.

of ever changing customer expectations, cooperative and collaborative relationship with customers seem to be the most prudent way to keep track of their changing expectations and appropriately influencing it (Sheth and Sisodia, 1995). As companies began to improve on Customer Relationship Management, instead of simply gathering data for their own use, they began giving back to their customers not only in terms of the obvious goal of improved customer service by processing the gathered information two-way and rewarding the customers by incentives, gifts and other perks for customer loyalty. This was the beginning of the now familiar frequent flyer programs, bonus points on credit cards and a host of other resources that are based on CRM tracking of customer activity and spending patterns. CRM was now being used as a way to increase sales passively as well as through active improvement of customer service. With the increased fluidity of these programs came a less rigid relationship between sales, customer service and marketing. There was a desperate need for development of new strategies for more cooperative work between these different divisions through shared information and understanding, leading to increased customer satisfaction from order to end product.

As data grew and became more complex, analysis of the problem as to how reactive customer is to the offering of the company became more interest to the company. The dynamic nature of the customer to the offerings in the market place led to the emergence of Real Customer

Relationship Management as it's thought of today. As software companies began releasing newer, more advanced solutions that were customizable across industries, it became feasible to really use the information in a dynamic way. The relationship between the company and customer was coined and was looked to be marketing tool for all future transactions. Instead of feeding information into a static database for future reference, CRM became a way to continuously update understanding of customer needs and behavior. Branching of information, sub-folders, and custom tailored features enabled companies to break down information into smaller subsets so that they could evaluate not only concrete statistics, but also information on the motivation and reactions of customers.

1.5: THE REASON OF CRM

In the marketing writing the terms customer relationship management and relationship marketing are utilized reciprocally. As Nevin (1995) focuses out, these terms have been utilized to reflect an assortment of topics and viewpoints. Some of these subjects offer a limited utilitarian marketing viewpoint while others offer a point of view that is wide and sort of paradigmatic in methodology and introduction. A thin point of view of customer relationship management is database marketing accentuating the promotional parts of marketing interfaced to database deliberations (Bickert, 1992)[37].

[37]Bickert, Jock (1992), "The Database Revolution," Target Marketing, (May), pp.14-18.

An alternate slender, yet important, perspective is to consider CRM just as looking for customer maintenance by utilizing a mixture of in the wake of marketing strategies that lead to customer holding or staying in contact with the customer after a deal is made (Vavra, 1992). A more famous methodology with the late application of data technology is to concentrate on individual or balanced relationships with customers that coordinate database learning with a long-term customer maintenance and development system. Hence, Shani and Chalasani (1992)[38] have characterized relationship marketing as "a coordinated exertion to distinguish, keep up, and develop a system with singular consumers and to ceaselessly fortify the system for the common profit of both sides, through intuitive, individualized and valueadded contacts over a long time of time" (p. 44). Jackson (1985)[39] applies the individual record idea in industrial markets to recommend CRM to signify, "Marketing focused toward solid, enduring relationships with individual records" (p. 2). In different business settings, Doyle and Roth (1992)[40], have proposed comparative perspectives of customer relationship management.

Mckenna (1991)[41] has declared a more key view by putting the customer first and shifting the part of marketing from controlling the

[38]Shani, D. and Chalasani, S. (1992), "Exploiting niches using relationship marketing", The Journal of Consumer Marketing, Vol. 9 No. 3, pp. 33-42.
[39]Jackson, Barbara B. (1985), Winning and Keeping Industrial Customers: The Dynamics of Customer Relationships, Lexington, MA: D.C. Heath and Company.
[40]Doyle, Stephen X. and Roth George Thomas (1992), "Selling and Sales Management in Action: The Use of Insight Coaching to Improve Relationship Selling," journal of Personal Selling & Sales Management, (Winter), pp. 59-64.
[41]McKenna, Regis (1991), Relationship Marketing: Successful Strategies for the Age of the Customers. Addison- Wesley Publishing Company.

customer (telling and selling) to authentic association with the customer (conveying and sharing information). Berry (1995), in sort of more extensive terms, likewise has a key perspective concerned with CRM. He has focused on that pulling in new customers ought to be seen just as an intermediate venture in the marketing procedure and that creating closer relationship with these customers and transforming them into reliable ones ought to be similarly imperative parts of marketing. Along these lines, he suggested that relationship marketing be seen as "pulling in, keeping up, and – in multi-administration organizations – upgrading customer relationships" (p. 25).

Berry's thought of customer relationship management takes after that of different researchers mulling over services marketing, for example, Gronroos(1990), Gummesson (1987), and Levitt (1983). Albeit every one of them has upheld the estimation of communications in marketing and its subsequent effect on customer relationships, Gronroos and Gummesson take a more extensive viewpoint and supporter that relationships with customers be the center and predominant paradigm of marketing. Case in point, Gronroos (1990) states:

"Marketing is to secure, keep up, and improve relationships with customers and different accomplices, at a benefit, so that the targets of the gatherings included are met. This is accomplished by a common

trade and satisfaction of guarantees" (p. 138). The ramifications of Gronroos' definition is that structuring relationships with customers is the "raison deetre" of the firm and marketing should be given to building and upgrading such relationships. Thus, Morgan and Hunt (1994)[42] draw upon the qualification made between transactional trades and social trades by Dwyer, Schurr, and Oh (1987)[43] to recommend that relationship marketing "alludes to all marketing exercises directed toward making, creating, and keeping up fruitful relationships."

The center subject of all CRM and relationship marketing points of view is its concentrate on a helpful and collective relationship between the firm also its customers, and/or other marketing performers. Dwyer, Schurr, and Oh (1987) have portrayed such helpful relationships as being reliant and long haul orientated instead of being concerned with fleeting discrete transactions. The long haul introduction is frequently underlined in light of the fact that it is accepted that marketing performing artists won't take part in artful conduct on the off chance that they have a long haul introduction and that such relationships will be secured in common gains and participation (Ganesan, 1994).

[42]Morgan , Robert M. and Hunt, Shelby D. 1994, 'The Commitment - Trust Theory of Relationship Marketing', Journal of Marketing, 58 (3), pp-20-38.
[43]Dwyer, F. Robert, Paul H. Schurr, and Sejo Oh (1987), “Developing Buyer–Seller Relationships,” Journal of Marketing, 51 (April), 11–27.

An alternate imperative aspect of CRM is "customer selectivity." As a few exploration studies have demonstrated, not all customers are similarly profitable for an individual organization (Storbacka, 2000). The organization consequently should be specific in customizing its program and marketing endeavors by segmenting and selecting proper customers for individual marketing projects.

1.6 :THE FUNCTIONALITY OF CUSTOMER RELATIONSHIP MANAGEMENT

Intermittent evaluation of results in CRM is required to assess if the projects are gathering desires and in the event that they are reasonable over the long haul. Execution assessment likewise helps in making remedial move regarding relationship governance or in adjusting relationship marketing destinations furthermore program characteristics. Without fitting execution measurements to assess CRM deliberations, it would be tricky to settle on target choices with respect to continuation, change, or end of CRM projects. Creating execution measurements is dependably a testing movement as most firms are slanted to utilize existing marketing measures to assess CRM. Nonetheless, numerous existing marketing measures, for example, piece of the overall industry and aggregate volume of sales may not be fitting in the connection of CRM. Actually when more CRM situated measures are chosen, they can't be connected consistently

over all CRM programs, especially when the reason for each one system is diverse.

For instance, if the motivation behind a specific CRM exertion is to upgrade circulation efficiencies by decreasing general appropriation expense, measuring the program's effect on revenue development and the customer's share of the business may not be proper. For this situation, the system must be assessed focused around its effect on decreasing appropriation costs and on other measurements that are adjusted to those goals. By blending the goals and execution measures one would hope to see more objective directed managerial activity by those included in dealing with the relationship.

For measuring CRM execution, an adjusted scorecard that consolidates a mixture of measures focused around the characterized motivation behind each program (or every helpful/community relationship) is proposed (Kaplan & Norton, 1992)[44]. As it were, the execution assessment measurements for every relationship or CRM system ought to reflect the set of characterized destinations for the system. Notwithstanding, certain global measures of the effect of a CRM exertion by an organization are likewise conceivable. Srivastava, Tassadduq, and Fahey (1998)[45] created a model to propose the benefit esteem of agreeable relationships to firms. On the off chance that the

[44] Kaplan, R. S. & Norton, D. (1992, January-February), "The Balanced Scorecard –Measures that Drive Performance." Harvard Business Review, 70, 71-79.
[45] Srivastava, R. K., T. A. Shervani, and L. Fahey (1998), "Market-Based Assets and Shareholder Value," Journal of Marketing, 62 (1), 2-18.

agreeable and community oriented relationship with customers is dealt with as an immaterial stake of the firm, its economic quality include could be evaluated utilizing marked down future money stream gauges. In a few ways, the estimation of relationships is like the idea of the brand value of the firm and thus numerous researchers have suggested the term relationship value (Bharadwaj, 1994; Peterson, 1995). Despite the fact that a overall acknowledged model for measuring relationship value is not accessible in the writing so far, companies are attempting to gauge its esteem, especially in measuring the immaterial holdings of the firm.

An alternate global measure utilized by firms to screen CRM execution is the estimation of relationship satisfaction. Like the estimation of customer satisfaction, which is presently widely connected in numerous companies, relationship satisfaction estimation would help in figuring out to what degree social accomplices are fulfilled by their current helpful and synergistic relationships. Not at all like customer satisfaction measures that are connected to measure satisfaction on one side of the dyad, relationship satisfaction measures could be connected on both sides of the dyad. Since both the customer and the marketing firm need to perform keeping in mind the end goal to create the brings about a helpful relationship, each one party's relationship satisfaction should be measured. By measuring relationship satisfaction, one could evaluate the inclination of either gathering to proceed with or end the relationship. Such an inclination could

likewise be indirectly measured by measuring customer loyalty (Reichheld & Sasser, 1990)[46]. At the point when relationship satisfaction or loyalty estimation scales are designed focused around the precursors, they can give rich data on their determinants and consequently help companies distinguish those managerial activities that are liable to enhance relationship satisfaction and/or loyalty.

Customer relationship management related activities make a dramatic impact on profitability. The characterization of CRM by mirrors the view. According to him, CRM seeks to establish 'long term, committed, trusting and cooperative relationships with customers, characterized by openness, genuine concern for the delivery of high quality services, responsiveness to customer suggestions, fair dealing and the willingness to sacrifice short term advantage for long term gains'. In yet another view of CRM with reference to profitability Fox & Stead, 2001[47] define CRM to be 'the establishment, development, maintenance and optimization of long term mutually valuable relationships between consumers and the organizations'. Successful customer relationship management focuses on understanding the needs and desires of the customers and is achieved by placing the needs at the heart of the business by integrating them with the organization's strategy, people, technology and business processes. Processes in turn alter the business performance of the organization.

[46]Reichheld, F. and Sasser, W.E. (1990), "Zero defections: quality comes to service", Harvard Business Review, Vol. 68 No. 5, pp. 32-40.
[47]Fox, Tricia, and Steve Stead (2001), "Customer Relationship Management: Delivering the Benefits," White Paper, CRM (UK) Ltd. and SECOR Consulting Ltd., Stirling and Surrey, UK.

Customer profitability is developing as an important measurement in which every (extraordinary) customer can be portrayed. A focus on customer-level profitability can likewise be considered as an impression of marketing's changing part inside the firm. In this connection, it is important that marketing has customarily falled behind other functional areas of business concerning the execution of cost control systems. An alternate variable behind the enthusiasm toward customer profitability (and its connections to conduct and state of mind) is the advancement of data innovation, e.g. in terms of "data warehouses", which allows for a definite dissection of every customer.

Regardless of the becoming enthusiasm toward customer profitability, recognizing profitable customers is liable to be simpler said than accomplished for generally organizations. The fundamental reason is that few organizations have an internal accounting system, which allows for an examination of profitability at the individual customer level as claimed by numerous academicians (Reichheld, 1996). In real practice profitability data on the customer level are by and large not gathered in observational studies did by marketing researchers. When its all said and done, profitability lies at the heart of the marketing idea. Thus, marketing's connection to profitability is pushed in the meanings of marketing offered by the Chartered Institute of Marketing and the American Marketing Association. It is accepted, in short, that it is more profitable to continue existing customers than to draw in

new customers, and it is generally expected that customer fulfillment serves as an especially important forerunner of customer retention and subsequently long-term customer relationships. Nonetheless, to establish the connection between Customer relationship and profitability needs more studies.

Customer profitability is a customer-level variable. It alludes to the revenues less the costs which one specific customer generates over a given time of time. All things considered, this variable alludes to the supplier's value of having one specific customer, not the customer's value of having a specific supplier. Customer profitability shows up in two transient structures in marketing-related writing. To start with, it shows up as a matter of authentic record. In this sense, a customer profitability dissection is like the company's profit and misfortune articulation. The fundamental distinction is that a customer profitability examination alludes to one specific customer, while a profit and misfortune explanation alludes to all customers. A history-situated customer profitability examination can be made at a few levels. A typical purpose of flight is to compute the commitment edge (horrible commitment edge), i.e. sales revenue less all item related costs for all items sold to an individual customer amid one specific time of time. At that point, contingent upon the accessibility of data, sales, general and regulatory costs traceable to the individual customer are subtracted. The result of this calculation is the working profit generated by the customer. An augmentation of this line of

speculation is the reckoning of "customer profit for resources", i.e. customer profitability isolated by e.g. the entirety of accounts receivable and stock (Rust et al., 1996)[48].

The other is customer profitability, which often takes the form of the output from a net present value analysis. The output is sometimes referred to as the "lifetime value" of a customer. It has been defined, for example, as the stream of expected future profits, net of costs, on a customer's transactions, discounted at some appropriate rate back to its current net present value. A similar concept is "customer equity" which is seen as a function of the customer's volume of purchases, margin per unit of purchase, and acquisition, development and retention costs traceable to this customer.

CRM as a success factor. CRM requires considerable investments and changes in operational and organizational structures (Homburg et al., 2000)[49]. The ultimate question is therefore whether customer orientation and the implementation of customer relationships are indeed important for a company's performance. Reichheld and Sasser (1990) presented an early and influential study that showed the tremendous impact that customer retention has on profitability and improves business performance. specifically showed that the longer

[48]Rust RT, Zahorik AJ & Keinigham TL, 1996, Service Marketing, HarperCollins, New York Taylor SE, 1991, Asymmetrical Effects of Positive and Negative Events: The Mobilization- Minimization Hypothesis, Psychological Bulletin, Vol. 110, No. 1, 67-85

[49]Homburg, Christian and Christian Pflesser (2000), "A Multiple- Layer Model of Market-Oriented Organizational Culture: Measurement Issues and Performance Outcomes," Journal of Marketing Research, 37 (November), 449–62.

the customer relationship lasts, the greater its profitability becomes. These authors' conclusions were supported by (Storbacka et al., 1994).

Research and practical experience have offered a generally positive portrait of the effect of customer relationship management (CRM) on firm performance. It is argued sometimes that a company's strategic commitments may be an overlooked organizational factor that influences the rewards for a company's investments in CRM. The study and practice of customer relationship management (CRM) has experienced explosive growth over the past decade and extensive research provides various insights into the relationship between a company's CRM investments and its performance. (Gupta, Lehmann, and Stuart, 2004)[50] find that customer acquisition and retention expenses have a significant, positive effect on firm value. Other studies report a positive relationship between a company's CRM technology investments and CRM performance (Jayachandran et al., 2004; Mithas, Krishnan, and Fornell, 2005)[51,52]. Other studies envisage CRM as a firm capability and, again, reports its positive effects on both CRM and business performance. Specifically, when effect of a company's CRM on CRM performance is seen, as measured by customer satisfaction ratings, it is influenced by its prior strategic

[50]Gupta, Sunil, Donald R. Lehmann, and Jennifer Ames Stuart (2004), "Valuing Customers," Journal of Marketing Research, 40 (February), 7–18.
[51]Jayachandran, Satish, Kelly Hewett, and Peter Kaufman (2004), "Customer Response Capability in a Sense-and-Respond Era: The Role of Customer Knowledge Process," Journal of the Academy of Marketing Science, 32 (Summer), 219–33.
[52]Mithas, Sunil, M.S. Krishnan, and Claes Fornell (2005), "Why Do Customer Relationship Management Applications Affect Customer Satisfaction?" Journal of Marketing, 69 (October), 201–209.

commitments. Strategic commitments can involve any long-term firm decision, such as the choice to enter specific markets or invest in products, brands, channels, or partnerships or technology.

Notwithstanding hypothetical improvement, an essential for the connected advancement of CRM is that it ought to evidently improve firm execution. This is an important quality in the assessment of any firm or marketing movement. Writing audit generously demonstrates the conviction that the usage of CRM activities prompts firm value. Organizations have created demonstrated CRM practices that upgrade firm execution. Utilizing a detailed analysis approach, (Ryals, 2001)[53] shows that one of the business units she studied was able to achieve a 270% increase in business unit profits (above target) by implementing several straightforward CRM measures. Using a multi-firm (cross-sectional) database, show that companies that invest more in CRM activities and technology have greater customer satisfaction. Using another multi-firm database, (Mithas, Krishnan, and Fornell, 2005) show that the use of CRM applications is associated with increased customer knowledge, which in turn is associated with greater customer satisfaction.

Using yet another multi-firm database, show that firm performance measured in terms of retention and customer satisfaction is greater

[53]Ryals, Lynette, and Simon Knox (2001), "Cross-Functional Issues in the Implementation of Relationship Marketing Through Customer Relationship Management," European Management Journal, 19 (5), 534–542.

for companies that have good relational information processes in place. all use data collected within a single firm over time to develop specific CRM applications to increase the company's performance. Gustafsson, Johnson, and Roos (2005)[54] examine customer behavior over time and show that some of the intermediate relationship performance measures that emerge from the business-to-business literature (e.g., satisfaction, calculative commitment) directly and positively influence actual behavior in the form of retention within a business-to-consumer setting. (Payne and Frow, 2005)[55] emphasize that one major element in any CRM system is the measure relate to the value creation process. Thus, good CRM process measures provide the firm with the opportunity to gain deeper insights into how these intermediate process measures link to downstream firm performance.

[54]Gustafsson, Anders, Michael D. Johnson, and Inger Roos (2005), "The Effects of Customer Satisfaction, Relationship Commitment Dimensions, and Triggers on Customer Retention," Journal of Marketing, 69 (October), 210–18.

[55]Payne, A. F. T., & Frow, P. (2005).A Strategic Framework for Customer Relationship Management. Cranfield University Working Paper, in review.

CHAPTER – 2

INDIAN OIL CORPORATION : AN OVERVIEW

2.1 INTRODUCTION

Indian Oil, 'The Energy of India' has always been fulfilling nation's energy demand, which is the basic need for any country's growth and development. Be it scorching heat or extreme cold, day or night, plains or hills, we work indefatigably so that our countrymen always maintain speed and momentum.

However, global economic crisis, climate change and occurrence of frequent natural calamities compelled us to reanalyze our strategy, which is primarily growth focused. We have understood that economic growth alone cannot sustain the world. We need amore sustainable approach to growth and development.

Indian Oil with over 34,000 strong workforce, is meeting the growing energy needs of the nation in economically, environmentally and socially responsible way. This involves running our operations responsibly today and building a sustainable energy system for tomorrow.

Indian Oil is India's highest ranked Indian corporatein the prestigious Fortune 'Global 500' listing at 88thrank in year 2013. Indian Oil and

its subsidiaries own and operate 10 of India's 22 refineries and its crosscountrynetwork of over 11,000 kms of crude oil, products and gas pipelines, which is the largest in the country. Indian Oil has a portfolio of powerful and much-loved energy brands that include Indane,

LP Gas, SERVO lubricants, XTRAPREMIUM petrol,XTRAMILE diesel, etc.Indian Oil is vertically integrated energy company through Exploration and Production activities on the upstream and Petrochemicals and gas marketing on the downstream within India and abroad. For future growth prospects, Renewable Energy Portfolio of Wind and Solar Energy generation, Feedstock production of Bio fuels and Ethanol blending and Nuclear Energy generation in association with NPCIL have been embraced. With aworld-class R&D Centre, Indian Oil conducts pioneering work in lubricants formulation, refining processes, cost effective pipeline transportation and development of alternative fuels.

Indian Oil's journey in E&P is gaining strength step by step with a view to establishing itself as an operator as well as global upstream player. After acquiring stake in Carabobo, Venezuela, two oil wells have come into production. Additionally, 10% working interest in producing Shale Oil condensate asset in USA has been acquired along with Oil India Limited. As an

operator in Cambay Blocks, Indian Oil is gaining valuable experience.

With facilities spread over the entire nation and ever-expanding market opportunities, Indian Oil has become a truly integrated energy company. Government of India holds 78.92% share in Indian Oil. The administrative control of the company vests with Government of India and therefore, various policy decisions forms the underlining principles of our Corporate Governance. Indian Oil has also successfully combined its corporate social responsibility agenda with its business offerings to millions of people.

2.2 SUSTAINABILITY

Indian Oil, a globally admired Energy Company is becoming a key player in the evolution of India's strategy for sustainable development by addressing the concerns for environment, aspirations of community and creating values for stakeholders.

Our commitment to sustainability has its roots in our vision. Accordingly we have formulated our sustainability strategy that supports our communities, enhance our business relationships to create a brighter future for our next generation. Our sustainability strategy allows us to focus on long-term sustainable business opportunities, manage risks, enhance our corporate reputation and to get competitive advantage.

In developing plans for the future, we are mindful of our influence on natural resources and their development. We understand our responsibility towards society, the role we have to play to address the menace of climate change and other sustainability challenges.

During the year, we continued to carry out eco-foot printing exercise, wherein mapping of green house gas emissions, water consumption and waste generation were carried out on 'as is' basis. Additionally, during the year, energy audit of office buildings was carried out in various locations. A number of mitigation actions, such as commissioning of rainwater harvesting systems, solarization of retail outlets, installation of organic waste converters, organizing carbon-neutral events, sustainability seminars and conducting awareness generation programmes were also carried out during the year.

With our sustainability initiatives and conducive policy environment, Indian Oil has forayed into green energy generation, which is an attractive and rewarding investment to minimize interactions of our business operations with environment.

In the fields of carbon mitigation, waste management and energy management, we have outperformed our targets for the year 2012-13. Following tables show our performance of the last year and our target for the next year.

Achievement for Year 2012-13		
Parameter	**Target (no. of locations)**	**Achievement (no. of locations)**
Carbon Mitigation		
Carbon foot printing exercise	30	48
Carbon neutral events	NA	6
Energy Management		
Energy Audit of Office Building	5	28
Retail Outlet Solarisation	100	276
Water Conservation		
Rain Water Harvesting System	40	66
Waste Management		
Organic Waste Converter	5	9
Awareness Generation Programmes		
Sustainability Workshops	2500 man-hours	4375 man-hours

Target for Year 2013-14	
Parameter	**Target (no. of locations)**
Carbon Mitigation	
Carbon foot printing exercise	60
Carbon neutral events	10
Energy Management	
Energy Audit of Office Building	40
Solar PV Installation at Refineries/ Offices/ Townships/ Installations/ Retail Outlets etc	400 KW
Water Conservation	
Rain Water Harvesting System	45
Water Footprinting Exercise	60
Awareness Generation Programmes	
Sustainability Workshops	40

Table 2.1: Performance (Last Year) and Target (Next Year).

Use of Renewable energy against the conventional source i.e. fossil fuel energy is the key business enabler to reduce GHG. Our first on-grid wind power system of 21 MW was commissioned in2009 at Kutch, Gujarat and first on-grid solar PVpower plant of 5 MW capacities in 2012 at Rajasthan. Our on grid wind power projects of a combined capacity of 48.3 MW are commissioned at two sites in Andhra Pradesh. The grid-connected renewable energy generation during the year crossed the 100 GWh mark.

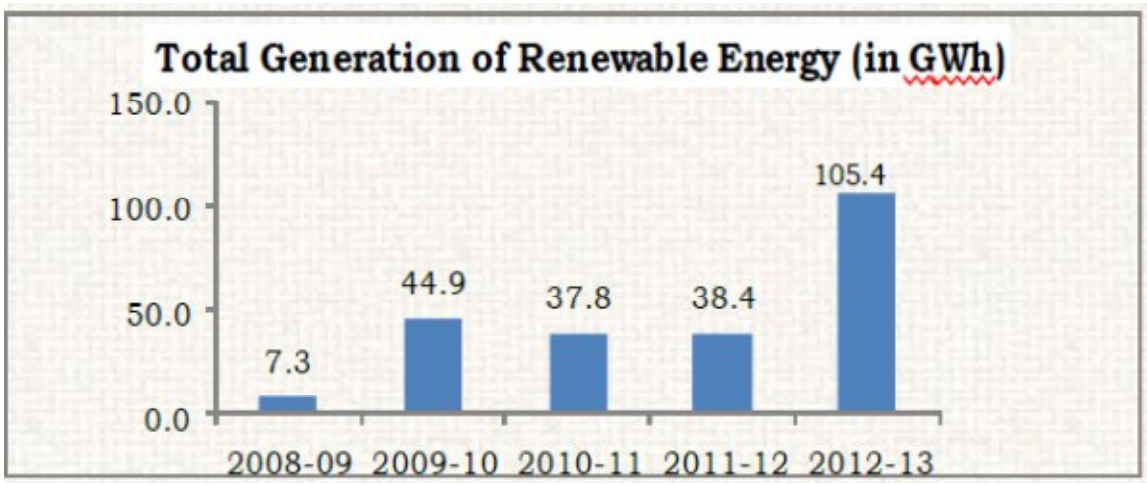


Figure2.1: Total Generation of Renewable Energy.

Indian Oil has completed Jatropha plantation in about 8000 ha of wasteland in the states of MP, UP and Chhattisgarh. Our joint venture company Indian Oil-CREDA Biofuels Limited supplied 172kLof de-metalled and degummed Jatropha oil to Chennai Petroleum Corporation Limited for pilotstudies on co-processing of vegetable oils for production of green diesel, which was successfully co-processed during the year using the technology developed by our R&D Centre. We have ventured into nuclear energy generation of 1400 MW

Capacity through a JV namely "NPCIL Indian Oil Nuclear Energy Corporation Limited", with an equity participation of 26% in the Rajasthan Atomic Power Project. We are poised to commence power generation by 2017.

Policy –

In pursuit of this Policy, Indian Oil is committed:

- To conduct business in a sustainable manner while meeting stakeholders' aspirations for value creation and growth
- To enrich quality of life of communities around its locations
- To work towards lowering waste and carbon footprint by judicious and efficient use of resources
- To engage employees & business partners as change agents for sustainable practices
- To be a partner in nation's strategy for deployment of sustainability initiatives
- Reinforcing its commitment towards Sustainability, Indian Oil launched its Sustainability policy together with Framework, Roles and Responsibilities for Sustainable Development, Plan and Organizational structure for monitoring Sustainability performance.

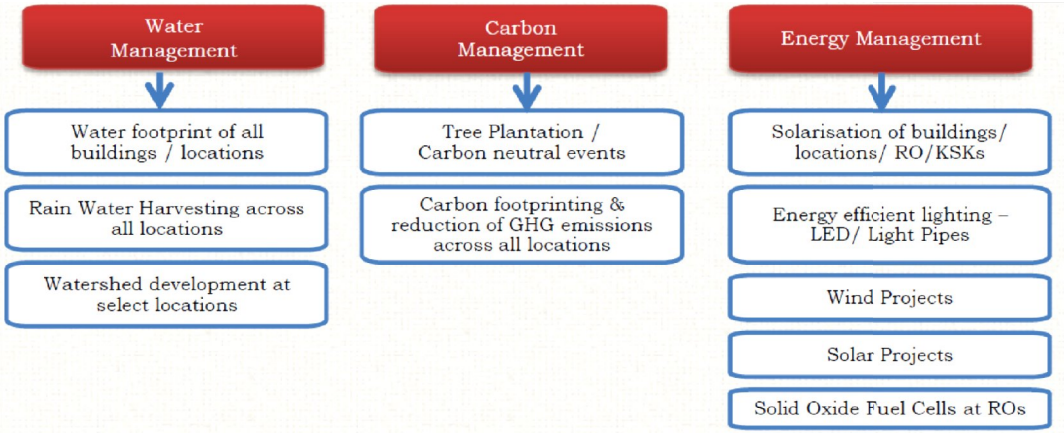


Figure2.2: Sustainability policy.

2.3 CORPORATE GOVERNANCE

We believe that good Corporate Governance practices ensure ethical and efficient conduct of the affairs of the company and also help in maximizing values for all stakeholders. We have built an environment of trust and confidence among all the constituents. The Company upholds the principles and practices of Corporate Governance to ensure transparency, integrity and accountability in its functioning.

Indian Oil recognizes that good Corporate Governance is a continuous exercise and reiterates its commitment to pursue highest standards of Corporate Governance in the overall interest of stakeholders. For effective implementation of the Corporate Governance practices, Indian Oil has a well-defined policy framework.

Board Profile –

As on 31st March 2013 the strength of the Board of Directors was 15comprising of 8 executives (Whole-time Functional) Directors (including Chairman), and 7 part time Nonexecutive Directors, out of which 5 are Independent Directors. Indian Oil, being a PSU, government nominates Directors and as on 31st March 2013, two Government Nominee Directors were in the Board. Women representative in the Board is 6.67%.

All our Directors belong to General category and are above 50 years of age. The Board members are persons with proven record in diverse areas like energy, law, academics, finance, economics, marketing, administration, etc. The Board is the highest governance body for guiding the overall strategy, policies and oversee their implementation. To facilitate smooth and efficient flow of decision, various Board Committees have been constituted. The agenda placed before the Board on various issues and details of the Board meetings held during 2012-13 are depicted in our annual report.

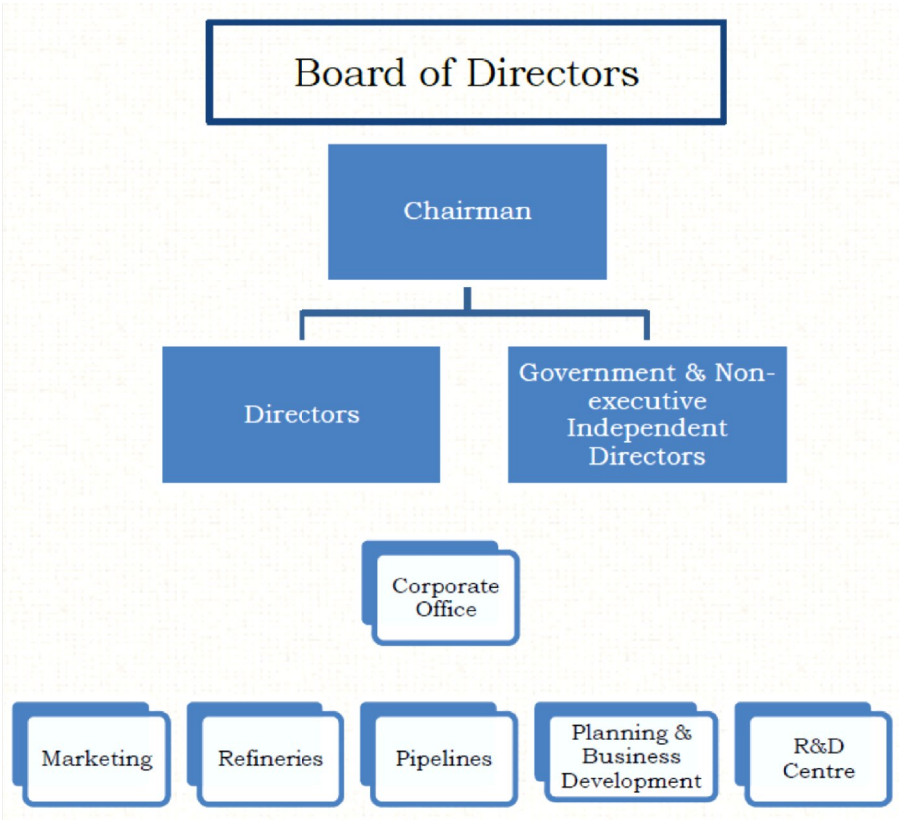


Figure2.3: Board of Directors – IOCL.

Ethics and code of conduct –

Indian Oil is an equal opportunity employer. There is no discrimination for employment or growth and development on the basis of caste, color, gender, religion or region. Indian Oil focuses on improving the skills of its human asset.

Indian Oil has a structured grievance handling procedure for employees. A Grievance/Complaint Record is also maintained for registering grievances/ representations received from OBC/SC/ST employees and grievances so registered are promptly considered for resolution.

A well defined and strictly implemented policy on prevention of sexual harassment at the workplace is in place. During the year, 2complaints related to sexual harassment were filed and were dealt as per rules. During the reporting period, no cases of indigenous rights and discriminatory practices reported. Nonfinancial and in-kind contributions were given to political parties, politicians, and related institutions.

Sustainable Procurement –

Indian Oil encourages participation in its business procurement process from small and medium enterprises as per Public Procurement Policy for MSMEs issued by Govt. of India. We do not

prefer any local vendors for our procurement process as it is done on competitive bidding. Also, we have sound e-procurement practices based on the principles of competitiveness and such procurement practices are executed in manner that is transparent, fair, competitive and cost effective.

Risk Management –

Indian Oil has laid down the Enterprise Risk Management Policy and Procedures for risk assessment and mitigation. As per the 'Risk Management Policy' of Indian Oil, a 'Risk Management Compliance Board' is established. A meeting of Senior Officials is convened once every quarter to assess various risks (both internal &external, including climate change related risks) and are categorized as 'A' and 'B' category risks.

This committee debates these issues threadbare and devises action plans to mitigate them. These are presented to the Executive Committee, which consists of Chairman and functional Directors of the Board.

Human Rights –

Indian Oil follows high standards of human right values. All of our General Conditions of Contract with our suppliers and contractors meet human rights requisites. It mainly covers gender sensitive approaches like separate toilets, washing and bathing places, providing crèches to mothers bearing children of age below 6 years.

Canteen facilities and medical precautions are must for both women and men. Nondiscrimination in the payroll is allowed on the basis of gender, caste, creed, religion and race. All our locations are monitored and reviewed to reduce human right risks. Under Community Development Programme for deprived section of the society, development funds towards Special Component Plan (SCP) and Tribal Sub Plan (TSP) are already implemented.

Liaison officers are appointed at various locations/units/ installations all over the country to ensure implementation of Government directives. Indian Oil scrupulously follows the presidential directives and guidelines issued by GOI regarding reservation in services for SC/ ST/OBC/ PH, etc to promote inclusive growth.

Indian Oil has implemented the provisions of the Disabilities Act 1995 by way of 3% reservation for physically challenged and disabled persons. In addition, various concessions and relaxations are being extended to the physically challenged in the recruitment process.

Anti-Corruption and Anti – Competitive Behavior-

Indian Oil consistently works against corruption in all its forms. Our Conduct, Discipline and Appeal rules outline our approach to assessing fraud risks, reporting, investigating and responding to suspected incidents of fraud and corruption which is mandatory for all our employees to comply with. As a responsible corporate citizen, Indian Oil undertakes and implements widely accepted initiatives like the Grievance Re-dressily mechanism and the Whistleblower policy.

Our Vigilance Cell carries out preventive activities like increasing awareness regarding the Central Vigilance Commission (CVC) rules/guidelines, ensuring quality and quantity of products in transit as well as sales points across the country, conducting system studies to bring out irregularities/ inconsistencies, bringing transparency and economy in awarding as well as execution of contracts. 100% of our units are analyzed for anti-corruption and related risks.

Number of training programs and workshops are held for spreading knowledge related to checking and identifying corruption. Indian Oil has an inbuilt mechanism to check anti competitive behavior and complies with all government policies. Since last 5 years, two cases have beenfiled against the company relating to an anticompetitive behavior. One case is pending before the Competition Commission of India (CCI)wherein complainant has alleged cartelization by Oil

Marketing Companies, for collusive bidding against tender of NACIL for ATF supplies. The Delhi High Court has stayed the proceedings before CCI. In another case a party has alleged on- competitive price due to cartelization by Sugar Manufacturers & joint tendering by OMCsfor ethanol. The CCI dismissed the proceedings and an appeal by the party is pending before the appellate authority.

2.4 ECONOMIC PERFORMANCE

The year 2012-13 was marked by challenging economic environment both globally &domestically. Global economic growth decelerated to 3.1% in 2012 from 3.9% recorded in 2011. While US& Japan witnessed mild acceleration in their growth, the overall performance of the advanced economies deteriorated with output declining in the Euro Area as it continued to be in the clutches of the Sovereign debt crisis. Another setback to the global growth was the broad-based deceleration for a second year in a row in the Emerging Economies Group.

For the Indian economy, the year was marked by slowing growth and concerns over macroeconomic stability. GDP growth slipped to 5percent-the lowest India has seen in over a decade. Industrial slowdown and slump in investment aggravated during the year on account of infrastructural bottlenecks, high interest rates, delay in clearances and acted as major drag on the growth. High oil, coal and

gold imports coupled with decline in exports contributed significantly in the spiking of CAD from 4.2 percent in 2011-12 to 6.7 percent of GDP in Q3 of 2012-13, which was contained to4.8 percent of GDP for the full year 2012-13through abatement measures. The depreciation of Rupee, which has intensified lately, has further added to these concerns. Inflation did show signs of moderation though it continued to elevate. During the year, WPI inflation stood at 6percent as compared to 8 percent in the previous year. Fiscal deficit during the year provisionally estimated at 4.9 percent of GDP was lower than the Budget Estimate of 5.1percent of GDP.

During 2012, global energy consumption growth slowed down to 1.8 percent from 2.5 percent recorded in 2011 on account of deceleration in global economic activity. On the supply side, the overall situation was mixed, while on one hand, geo-political uncertainties and supply outages did continue to disturb the energy markets, on the other hand, there were positive developments such large scale gas finds in East Africa, steady progress on the unconventional hydrocarbons production front, especially in the US and the boom in the global LNG sector.

Crude oil prices also moderated on an average during the year and while natural gas prices fellin USA, they rose in Europe & Asia. On the demand side, consumption in OECD countries declined by 1.2 percent led by a decline of 2.8

Percent in the US. As regards, the Non-OECDcountries, consumption growth decelerated to 4.2percent from 5.3 percent in 2011.

Petroleum products, after coal are the largest source of meeting energy needs in India. Petroleum products are the mainstay of the Indian transportation sector, have a large marketing the household sector, agriculture and industry as well. The Corporation's strategy with respect to its core business operations is a two-pronged one, where while it focuses on expansion, it also focuses on raising the efficiency bar of the existing and new ventures.

In the refining space, the Corporation has been continuously upgrading and expanding its refineries to meet the changing product demand patterns, environmental norms and increasing demand. In addition, a major focus is on setting up new grass-root refineries with world scale capacity having higher complexity in Coast allocations to cash on the growing petroleum products demand in India. In line with that Corporation’s 15 MMTPA refineries at Paradip in Odisha is upcoming. On the operational front focus is on cost optimization, and accordingly the crude basket is being expanded steadily to include cheaper opportunity crudes. IndianOilhas not received any financial assistance from the Government of India during the reporting period.

On the marketing front, the Corporation has stronghold over the market, with its pan India sales network being its major strength. The

year witnessed significant changes in the policy domain, which are set to bring about structural changes in the petroleum products market in the country. This new paradigm will be defined by high levels of Competition as the retail market opens up to the dynamics of market forces. The Corporation's strategy for maintaining its leadership in the retail business rests on the twoCs of Customer Loyalty & Cost Optimization.

Technology solutions such as automation of infrastructure, GPS enabled vehicle tracking systems, modernization of the dispensing units, improving Retail Visual Identities of retail outlets, imparting training to dealers and pump

Attendants, Infrastructure rationalization and retail network expansion are key focus areas in pursuit of this.

As regards its pipeline network focus on the crude pipelines front is to enhance capability of pipelines to transport heavier crude oil, on product pipelines front focus is on scaling up theLPG pipelines network and as regards gas, focus is to establish a significant position in the upcoming national natural gas grid.

The Corporation has established itself as the second largest player in the Indian Petrochemicals market. Indian Petrochemicals market has high growth potential and has been growing at impressive rates. The Corporation has sizeable investment plans lined up for the

Petrochemicals space. A major thrust is to enter the import substitution market. The Corporation's Butadiene Extraction Unit and Butene -1 project at Panipat are under steady progress. The Corporation is also setting upcountry's first Styrene Butadiene Rubber (SBR) unit in Panipat, which has reached advanced stages of implementation. In the market for polymers, where your Corporation has recently ventured thrust is to enter niche & specialized markets.

Human Resource is the mainstay of any organization. Attracting and retaining the required talent is a continuing challenge for the Corporation. As Corporation's business in areas beyond its core expands, it has been working towards diversification of its talent pool as well. Initiatives for bringing in greater transparency, fairness and equity for the employees in respect to their career paths are thrust areas for the Corporation. A major challenge that has emerged in the context of the changing business realities that are set to play in, as competition in the market increases is to equip, train, facilitate, motivate and rationalize its manpower.

2.5 ENVIRONMENTAL PERFORMANCE

One of the greatest challenges for the 21stcentury is the increasing temperature of the planet. Carbon dioxide levels have reached its highest throughout human history, as per the National Oceanic and Atmospheric Administration (NOAA), Mauna Loa observatory in

Hawaii. The 9th May 2013 reading of the observatory was first notified to break the symbolic milestone of 400 parts per million which was later revised to 399.89. This might be taken in the context that at 450 PPM, it is predicted that the global temperatures will rise by 2°C above pre industrial levels by the International Energy Agency bringing about widespread climate change effects. We are moving closer to adverse impacts of climate change - changing landscapes, stronger storms and increased storm related damages, higher temperatures, increased risk of drought, rising seas, more heat related illness and diseases and wildlife at risk.

As a major supplier of energy, Indian Oil believes sit has a responsibility to take lead in finding and implementing plans to counteract climate change. We recognize preservation of ecological balance as a core commitment for ensuring abetter world for the future generations.

A total of 120 schemes with estimated savings of1, 20,000 SRFT have been implemented during the year which has resulted in operational efficiency improvement. The impact of additional savings with major ENCON investments in 2013-14 would be approx. 83000 SRFT. Some of the major Energy Saving projects during 2012-13were:

- Optimization of Hydrogen use and improved recovery through PSA (Pressure Swing Adsorption) systems has enabled idling of one Hydrogen Generation Unit each at three of the refineries.
- Pre-heat improvements in AU (Atmospheric Unit)-4 at Gujarat refinery and AU (Atmospheric Unit)-I/II at Barauni refinery for savings in energy consumption.
- Better process integration for improved heat recovery at Guwahati refinery (kerosene-1 and (Coker Gas Oil)-CR (Circulating Reflux) streams) and Panipat refinery (Naphtha Splitter) and MSQ (Motor Spirit Quality Up-gradation Unit).
- Savings in power consumption by installation of step-less controllers for compressors in DHDT (Diesel Deep Hydro-treating Unit) at Mathura refinery and Once through Hydrocracker Units (OHCU) at Haldia refinery.
- Optimization in Gas/Oil ratios in DHDT at Barauni refinery and OHCU in Haldia refinery for lower power consumption of recycle gas compressors.
- Full back pressure mode operation of TG1(Turbo-generator1) at Barauni refinery, improvement in operating efficiency of GT(Gas Turbine)-2 at Gujarat refinery and STGs (Steam Turbo-generator) at Panipat and condenser cleaning for increased power generation efficiency at these refineries.

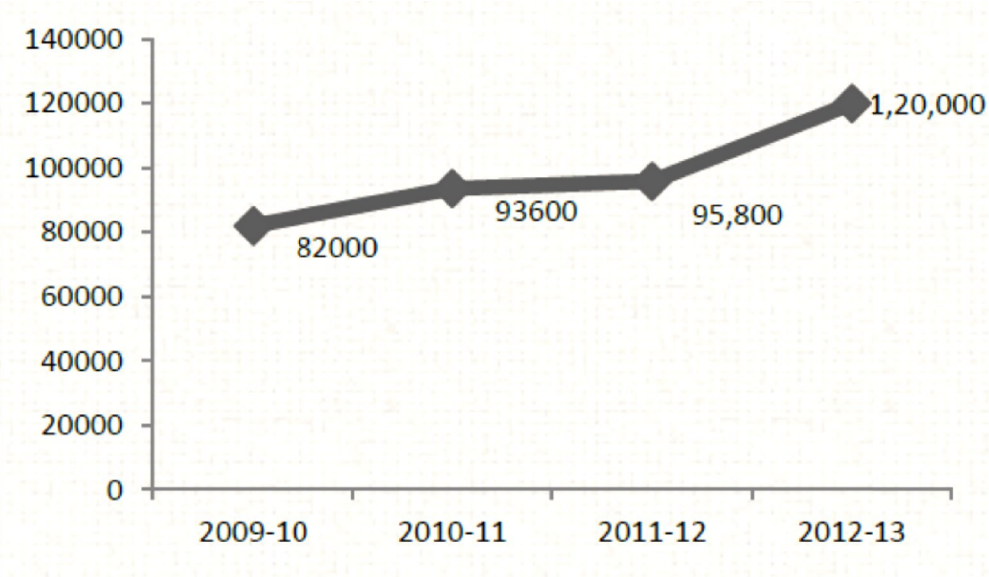


Figure2.4: Estimated savings of Standard Refinery Fuel in Tones (SRFTs).

- The use of variable frequency drive for mainline pumping unit and use of Drag Reducer Agent (DRA) in mainline to increase the flow of the product in pipeline facilities.
- Other activities that are spread extensively across organization such as solar powered equipments, energy efficient gadgets, use of light pipes for day-lighting etc.

Indian Oil's relentless efforts towards Energy Conservation resulted in reduction of overall specific energy consumption to 56.3MBTU/BBL/NRGF (MBN) during 2012-13against the earlier lowest of 57 in 2011-12. This has been possible through implementation of various energy saving schemes and close monitoring of energy parameters.

As a part of sustainability drive Indian Oil is making its office buildings green and energy efficient. Leadership in Energy and Environmental Design (LEED), an international green building rating system providing a green building status/certification from Indian Green Building Council (IGBC) or US Green Building Council (USGBC). Our recently commissioned Administration Building and Learning Center Building of the Panipat Naphtha Cracker Project have been awarded the 'Green Building Certification and Gold rating' under LEED system of rating by IGBC.

The Award heralds a new era and the first major step of Indian Oil towards greening of its habitats, since these are among the first buildings of Indian Oil, ever to be Green certified with a 'Gold Rating'. The Green rating has been awarded considering several environments related attributes defined by LEED, which includes: sustainability of site, water efficiency, energy efficiency, eco-friendly material sand resources, indoor environmental quality, innovation and design process. Some of the features that were instrumental in achieving this rare accolade include the superior architectural design, use of recyclable material such as tiles, glass, and gypsum board, building management system for controlling thermal comfort etc.

2.6 SOCIAL RESPONSIBILITY

Indian Oil's CSR related objectives are aptly enshrined in its CSR goals are "...to help enrich the quality of life of the indigenous communities and preserve ecological balance and heritage through strong environment conscience...". At present, IndianOil has a policy of setting aside up to 2% of its retained profit of the previous year towards CSRactivities. Health & Medical Care, Education and Clean Drinking Water are the CSR thrust areas ofIndianOil. The key objectives of Indian Oil CSRinitiatives are as under:

- Initiatives to enrich quality of life in the communities around Indian Oil's operating locations.
- Efforts towards sustainability of CSR projects.
- To positively impact economic conditions and livelihood.
- Foster a culture of 'CSR' amongst employees, business associates and stakeholders.
- Make business associates responsible for undertaking CSR activities around their workplaces/ operational areas.
- Create community goodwill for Indian Oil through CSR initiatives and help establish/ retain image of Indian Oil as a Responsible Corporate Citizen.
- Provide leadership and industry benchmark in CSR initiatives.

Policy guidelines provided by the Board Committee on CSR and Sustainable Development (SD) are implemented in a focused and structured manner. A dedicated CSR cell is functioning at Corporate Office to specifically plan and monitor/co-ordinate the CSR activities.

Additional manpower in middle management and senior management cadre have been deployed at Divisional, Regional and Unit levels to implement CSR activities.

All CSR programmes / projects are implemented with impact assessment carried out in line with CSR guidelines issued by Department of Public Enterprises, Government of India. Various social welfare initiatives viz. health & medical care, education and clean drinking water with focus on welfare of the economically and socially deprived sections of society are implemented, mostly in the vicinity of installations/establishments for improving quality of life of the community. No case is reported during the year where indigenous communities are affected by our operations. During 2012-13, Indian Oil's CSR investment was Rs. 78.97 crore. No significant fines were reported for non-compliance with laws and regulations during the reporting year.

IOCL's Indian Oil Foundation (IOF) formed in alliance with Archaeological Survey of India (ASI) and National Culture Fund (NCF) of the Government of India was formed with the objective to protect,

preserve and promote national heritage. Having initially taken up the project of installing a Swatantrya Jyot (flame of freedom) in the Cellular Jail at Port Blair, Andaman & NicobarIslands in remembrance of hundreds of brave Indians who suffered incarceration in this jail during the freedom struggle, IOF has been assisting ASI & NCF in maintaining and upgrading facilities at Konark (Odisha), Khajuraho (MP), Vaishali (Bihar) and Warangal Fort (AP). Simultaneous efforts are also being made to involve students of class 9th and 10th through heritage awareness programs, imbibing the importance of heritage and the need to preserve it among the participants.

CHAPTER – 3

INTRODUCTION TO PETROLEUM MARKET

3.1: ENERGY SECTOR: AN OVERVIEW

Energy is one of the major inputs for the economic development of any country. In the case of the developing countries, the energy sector assumes a critical importance in view of the ever increasing energy needs requiring huge investments to meet them.

Primary energy sources are those that are either found or stored in nature. Common primary energy sources are coal, oil, natural gas, and biomass (such as wood). Other primary energy sources available include nuclear energy from radioactive substances, thermal energy stored in earth's interior, and potential energy due to earth's gravity.

Primary energy sources are mostly converted in industrial utilities into secondary energy sources; for example coal, oil or gas converted into steam and electricity. Primary energy can also be used directly. Some energy sources have non-energy uses, for example coal or natural gas can be used as a feedstock in fertilizer plants.

Although 80 percent of the world's population lies in the developing countries (a fourfold population increase in the past 25 years), their

energy consumption amounts to only 40 percent of the world total energy consumption.

The high standards of living in the developed countries are attributable to high-energy consumption levels. Also, the rapid population growth in the developing countries has kept the per capita energy consumption low compared with that of highly industrialized developed countries. The world average energy consumption per person is equivalent to 2.2 tons of coal. In industrialized countries, people use four to five times more than the world average and nine times more than the average for the developing countries. An American uses 32 times more commercial energy than an Indian.[56]

Coal dominates the energy mix in India, contributing to 55% of the total primary energy production. Over the years, there has been a marked increase in the share of natural gas in primary energy production from 10% in 1994 to 13% in 1999. There has been a decline in the share of oil in primary energy production from 20% to 17% during the same period.

Energy Supply-

Coal Supply - India has huge coal reserves, at least 84,396 million tones of proven recoverable reserves (at the end of 2003). These amounts to almost 8.6% of the world reserves and it may last for

[56]Energy Handbook, Von Nostrand Reinhold Company - Robert L. Loftness

about 230 years at the current Reserve to Production (R/P) ratio. In contrast, the world's proven coal reserves are expected to last only for 192 years at the current R/P ratio.

Reserves/Production (R/P) ratio- If the reserves remaining at the end of the year are divided by the production in that year, the result is the length of time that the remaining reserves would last if production were to continue at that level.

India is the fourth largest producer of coal and lignite in the world. Coal production is concentrated in these states (Andhra Pradesh, Uttar Pradesh, Bihar, Madhya Pradesh, Maharashtra, Orissa, Jharkhand, West Bengal).

Oil Supply - Oil accounts for about 36 % of India's total energy consumption. India today is one of the top ten oil-guzzling nations in the world and will soon overtake Korea as the third largest consumer of oil in Asia after China and Japan. The country's annual crude oil production is peaked at about 32 million tones as against the current

Peak demand of about 110 million tones. In the current scenario, India's oil consumption by end of 2007 is expected to reach 136 million tons(MT), of which domestic production will be only 34 MT. India will have to pay an oil bill of roughly $50 billion, assuming a weighted average price of $50 per barrel of crude. In 2003-04, against total export of $64 billion, oil imports accounted for $21 billion. India

imports 70% of its crude needs mainly from gulf nations. The majority of India's roughly 5.4 billion barrels in oil reserves are located in the Bombay High, upper Assam, Cambay, Krishna-Godavari. In terms of sector wise petroleum product consumption, transport accounts for 42% followed by domestic and industry with 24% and 24% respectively. India spent more than Rs.1, 10,000 crore on oil imports at the end of 2004.

Natural Gas Supply - Natural gas accounts for about 8.9 per cent of energy consumption in the country. The current demand for natural gas is about 96 million cubic metres per day (mcmd) as against availability of 67 mcmd. By 2007, the demand is expected to be around 200 mcmd. Natural gas reserves are estimated at 660 billion cubic meters.

Electrical Energy Supply - The all India installed capacity of electric power generating stations under utilities was 1,12,581 MW as on 31st May 2004, consisting of 28,860 MW- hydro, 77,931 MW - thermal and 2,720 MW- nuclear and 1,869 MW- wind (Ministry of Power). The gross generation of power in the year 2002-2003 stood at 531 billion units (kWh).

Nuclear Power Supply - Nuclear Power contributes to about 2.4 per cent of electricity generated in India. India has ten nuclear power

reactors at five nuclear power stations producing electricity. More nuclear reactors have also been approved for construction.

Hydro Power Supply - India is endowed with a vast and viable hydro potential for power generation of which only 15% has been harnessed so far. The share of hydropower in the country's total generated units has steadily decreased and it presently stands at 25% as on 31st May 2004. It is assessed that exploitable potential at 60% load factor is 84,000 MW.

The per capita energy consumption is too low for India as compared to developed countries. It is just 4% of USA and 20% of the world average. The per capita consumption is likely to grow in India with growth in economy thus increasing the energy demand.[57]

India was the fourth-biggest vitality buyer in the world after China, the United States,

what's more Russia in 2011, and its requirement for vitality supply keeps on moving as a consequence of the nation's dynamic economic development and modernization over the past a few years. India's economy has developed at a normal yearly rate of give or take 7% since 2000, and it demonstrated generally flexible after the 2008 global monetary emergency.

[57]Handbook of Energy Engineering , The Fairmont Press Inc - Albert Thumann

The most recent log jam in development of developing business nations and higher expansion levels, consolidated with household supply and framework obligations, have lessened India's yearly expansion balanced horrible household item (GDP) development from a high of 10.3% in 2010 to 4.4% in 2013, as per the International Monetary Fund (IMF). India was the third-biggest economy in the world in 2013, as measured on an obtaining force equality premise.

The BJP, chose as the greater part party in May 2014 to oversee India in the accompanying five years, confronts difficulties to meet the nation's developing vitality request by securing moderate vitality supplies and pulling in speculation for foundation development. Very directed fuel costs for consumers, fuel subsidies that are shouldered by the legislature and state owned upstream companies, and conflicting vitality sector change presently obstruct vitality venture speculation. A few parts of the vitality sector, predominantly coal creation, remain generally shut to private and outside speculation, while others, for example, electric force, petroleum and different fluids, and natural gas have directed value structures that debilitate private venture.

Notwithstanding having huge coal stores and a sound development in natural gas creation over the recent decades, India is progressively subject to foreign made fossil fuels. In 2013, India's previous petroleum and natural gas priest, Veerappa Moily, declared that his

service would take a shot at an activity plan to make India vitality autonomous by 2030 through expanded fossil fuel creation, development of assets, for example, coalbed methane and shale gas, outside acquisitions by household Indian companies of upstream hydrocarbon saves, decreased subsidies on engine fuels, and oil and natural gas pricing changes. The current petroleum and natural gas priest, Dharmendra Pradhan, who took office in late May 2014, repeated the objective of making India independent in vitality assets. India is likewise looking to further create and saddle its different renewable vitality sources. These activities would adequately build India's vitality supply and make more effectiveness in vitality consumption.

India as of now started executing oil and gas pricing changes in the course of recent years to cultivate supportable venture and help lower subsidy costs. Essential vitality consumption in India has multiplied somewhere around 1990 and 2012, arriving at an expected 32 quadrillion British warm units (Btu). The nation has the second-biggest populace in the world, at more than 1.2 billion individuals in 2012, developing around 1.3% every year since 2008, as indicated by World Bank data. In the meantime, India's for every capita vitality consumption is one-third of the global normal, as indicated by the Universal Energy Agency (IEA), demonstrating possibly higher vitality request in the long term as the nation proceeds with its way of economic development. In the International Energy Viewpoint 2013,

EIA ventures India and China will represent about a large portion of global vitality request development through 2040, with India's vitality interest developing at 2.8% for every year.

India's biggest vitality source is coal, trailed by petroleum and customary biomass and waste. Since the start of the New Economic Policy in 1991, India's populace progressively has moved to urban communities, and urban families have shifted far from conventional biomass and waste to other vitality sources, for example, hydrocarbons, atomic, biofuels, and different renewable. The force sector is the biggest and quickest developing range of vitality interest, climbing from 22% to 36% of aggregate vitality consumption somewhere around 1990 and 2011, as indicated by the IEA. India's National Sample Survey Organization gauges that around 25% of the populace (in excess of 300 million individuals) need fundamental access to electricity, while jolted regions experience the ill effects of moving electricity power outages.

He legislature tries to adjust the nation's developing requirement for electricity with natural concerns from the utilization of coal and other vitality sources to create that electricity. India's transportation sector, principally fueled by petroleum items, is situated to extend as the nation concentrates on enhancing street also line travel. The legislature arrangements to order some option fuel use, especially with

biofuel mixes, and create more prominent utilization of mass travel systems to point of confinement oil request development.

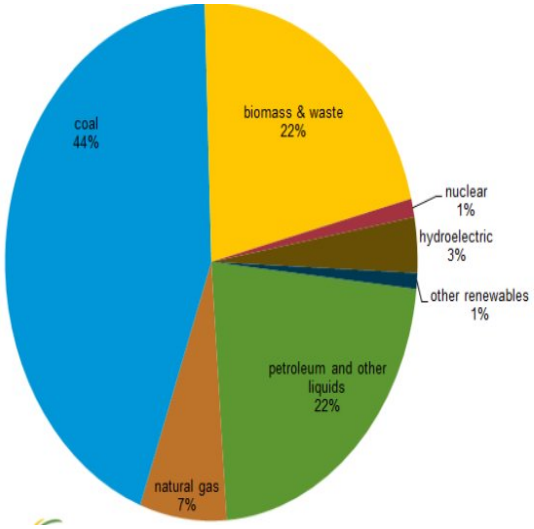


Fig 3.1: Total energy consumption in India, 2012.

As the Economic performance of the country rises, the requirement of energy and particularly petroleum shall also increase. The GDP shall have a direct linkage with the consumption of the petroleum products as this commodity still consumes a major proportion of the export earning towards fuel imports and shall continue to be so in future years.[58]

3.2: PETROLEUM INDUSTRY: THEORETICAL PERSPECTIVE

The Indian petroleum industry goes once again to 1890 when oil was first struck at Digboi in northeastern India. Oil investigation and

[58]Indian Planning commission statistics

generation exercises were to a great extent bound to the northeast until the 1970s when the most productive and critical Indian creating bowl, Bombay High, was found. While the investigation and generation sector stayed under the state control until 1991, the Government policy now permits joint and in addition private sector to take part in this sector.

India's first refinery was manufactured at Digboi in 1901. From that point, more refineries were set up in the late 1950s and early 1960s with the support of worldwide oil companies, for example, Shell, Caltex and Esso to meet India's developing petroleum item needs.

In 1976, India nationalized the refining and marketing sector in light of the oil emergency of the 1970s and presented administrative controls on generation, imports, circulation and pricing of crude oil and petroleum items. The Oil Coordination Board of trustees was framed to go about as an administrative body in this respect. With the key target of giving fundamental necessities to the economically weaker areas of the general public at moderate rates, the Administered Pricing Mechanism sponsored costs for items like lamp fuel and LPG by correspondingly charging higher costs for different items like gasoline and flying fuel. Diesel costs were kept impartial.

The Administered Pricing Mechanism guaranteed settled 12% post-tax return on net worth sent for refining, conveyance and marketing of

petroleum items. Likewise, petroleum item costs were kept up at an even level all through the nation by adjusting different subsidies through various pool accounts. Then again, in 1991, basic parity of installment position affected the Indian government to dispatch general economic changes with the target of changing the directed economy into a business sector driven one and draw in speculations from the private sector.

Under the liberalization policy, various structural progressions have as of now been effected in type of the private sector being permitted to do refining and in addition marketing of a predetermined number of petroleum items e.g. LPG, naphtha, Aviation fuel, fuel oil and so on. The most noteworthy step towards liberalization in the oil business however was proclaimed in November 1997 in manifestation of a diagram for de-regulation of the Indian oil industry.

India was the fourth-biggest purchaser of oil and petroleum items after the United States, China, and Japan in 2013, and it was additionally the fourth-biggest net shipper of crude oil and petroleum items. The hole between India's oil request and supply is widening, as interest arrived at about 3.7 million barrels for every day (bbl/d) in 2013 contrasted with short of what 1 million bbl/d of aggregate fluids creation. EIA undertakings India's interest will multiply to 8.2 million bbl/d by 2040, while residential creation will remain moderately level, floating around 1 million bbl/d. The high level of reliance on

transported in crude oil has headed Indian energy companies to broaden their supply sources. To this end, Indian national oil companies (NCOs) have acquired value stakes in abroad oil and gas fields in South America, Africa, Southeast Asia, and the Caspian Sea locale to procure holds and creation capacity. Notwithstanding, the dominant part of imports keep on going from the Middle East, where Indian companies have minimal direct get to venture.

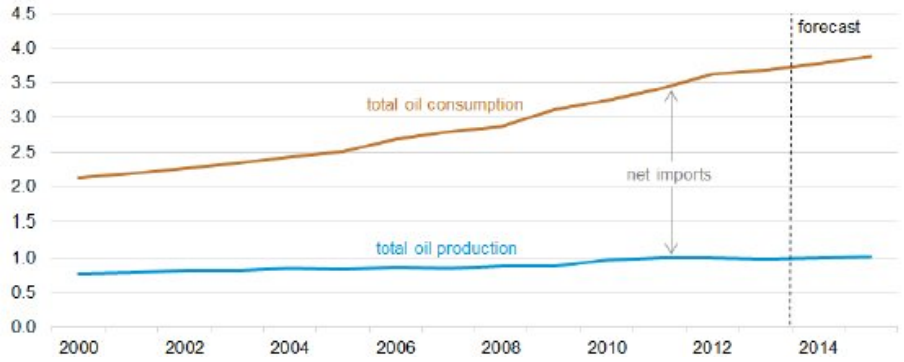


Fig 3.2: India petroleum and other liquids production and consumption, 2000-15.

Energy security is crucial for both sustaining high economic growth and controlling inflation. With rapid economic growth, energy demand in India has been rising rapidly, and India is now the fourth largest consumer of crude oil in the world. Unfortunately, India has to import most of its oil requirement, leading to severe pressure on the economy when the oil prices rise. Thus, estimations of crude oil demand and projections for the future should be useful to policy makers in making appropriate supply arrangements for the future.

There are many different sources of energy consumption, such as coal, crude oil, natural gas, hydroelectric, solar, wind, and nuclear energy. Out of India's total energy consumption, crude oil accounts for 24 per cent, natural gas 6 per cent, coal 40 per cent, combustible renewable and waste 27 per cent, hydroelectric power 2 per cent, and nuclear energy and wind energy about 1 per cent each; solar energy has an insignificant share (IEA 2008). Thus, crude oil and coal account for about two-thirds of India's energy consumption.

While India is reasonably self-sufficient in coal, it imports most of its crude oil requirement. Further, there are hardly any suitable alternatives to crude oil derivatives such as petrol and diesel for transportation purposes and most industrial machinery. Bio-fuels cannot be used on a large scale in a land-scarce country such as India, already struggling to produce sufficient food for its population. Thus, controlling crude oil consumption is difficult. India consumed nearly 3.25 million barrels of crude oil per day in 2010 and was the fourth largest consumer of oil in the world next to the US, China, and Japan. Of this, 70 per cent (nearly 2.2 million barrels per day) was imported in 2010, largely from Middle Eastern countries; this level of imports made it the fifth-largest importer of oil in the world. The International Energy Agency (IEA) expects that India would become

the fourth largest net importer of oil in the world by 2025 after the US, China, and Japan (and ahead of Germany).[59]

The petroleum business in India has been nearly managed: the Goi (Government of India) has subjected each one connection in the chain – E&p (investigation and generation), refining, marketing what's more circulation – to controls and checks. The oil emergencies of the 1970s were real drivers in provoking governments all over the world to intercede in the oil sector. The mediation was particularly proclaimed in oil importing nations, for example, India. As a consequence of the value climb, the Indian oil industry experienced a transformation. The guideline of import equality in pricing offered route to an APM (administered pricing mechanism) with an orderly summon and control framework. The need to guarantee oil security prompted the securing of outside oil companies that practically controlled the oil business in the first 50% of this century. Striking among these were Burmah Shell, ESSO, Caltex, and Indo-Burmah Petroleum. The basis was that all alone; markets would not give supply security or lead to socially alluring conclusions.

Under the APM, all substances are guaranteed a base return on their speculations. While the ONGC (Oil and Natural Gas Corporation Limited) and (Oil India Limited) are permitted a return of 15% on

[59]Adams, F. Gerard and Shachmurove, Yochanan (2008), "Modeling and forecasting energy consumption in China: Implications for Chinese energy demand and imports in 2020", Energy Economics, 30, 1263-1278.

utilized capital, the downstream companies get 12% (post tax) on their total assets.

After Coal, Oil is the biggest energy hotspot for the nation with a share of around 30.5% in the essential energy consumption basket1. The high rate of economic development in the Indian economy has been fuelled by an expanding interest for oil, and therefore, imports of crude oil are additionally expanding. The indigenous generation of crude oil has not been expanding in coupled with consumption and interest for petroleum items. For a developing economy like India, this hole is liable to increment over the impending years.

- Consumption of petroleum items amid 2012-13 was 157.1 million metric tons (MMT) (counting sales through private imports) which is 6.0% higher than the 148.1 MMT devoured amid 2011-12.

- During 2012-13 the nation transported in 184.8 MMT of crude oil and 10.91 MMT LNG against 171.7 MMT and 11.63 MMT separately amid 2011-12.

Being an ecologically clean fuel, Natural Gas is quick developing as an option to fluid hydrocarbon. Natural Gas right away meets around 8.7% of the essential energy request. Considering the global pattern of shift in energy blend from oil to natural gas, the share of natural gas in hydrocarbon consumption in the Indian setting is additionally prone to increment considerably in the days to come.

To take care of the developing energy demand throughout the following few years, India will need to improve its energy security by acquiring energy supplies at reasonable costs. While the nation has surplus refining limit and is a net exporter of petroleum items, real ventures will must be made in the local upstream industry and to gain hydrocarbon saves abroad. To this it appears that the initial couple of steps have as of now been taken, with the petroleum pastor, affirming raising crude oil yield from Barmer oilfield in the state of Rajasthan, and expressing that he is presently setting up a guide to cut India's energy imports by half in next seven years to make India confident by 2030.

In 2012-13 India relied on upon outside crude oil to meet 84.5% of its refinery prerequisite. Then again, as far as household consumption of petroleum items, the reliance was essentially lower, at 77%, the remaining import being gone for creation for fare markets.

Of the aggregate consumption of different sorts of petroleum items in 2012-13, high velocity diesel oil represented 43.98%. This was trailed by Petrol (10.02%), LPG (9.93%) and Naphtha (7.82%).

From the table over the consumption of petroleum products in light distillates in the year 2005-06other chemicals which comes the lowest 2365 tons and highest consumption of petroleum products in LPG as 10456 tons, and in the year 2012-13 the consumption of petroleum

products in lesser figures come 2660 tons and highest figure goes to 15744 tons, whereas the lowest percentage shows as 1.7 of LPG and highest percentage shows as 15.3 percent of other chemicals.[60]

Table over the consumption of petroleum products in center distillates in the year 2005-06other chemicals which comes 512 tonnesand highest consumption of petroleum products in LPG as 40191 tons, and in the year 2012-13 the consumption of petroleum products in lesser figures come 399 tons and highest figure goes to 69174 tons, though the lowest rate indicates as -7.3 percent of different chemicals and higher substance goes to 6.8 percent.

The consumption of petroleum products in overwhelming closures in the year 2005-06other waxes which comes 105 tonnesand highest consumption of petroleum products in heater oil as 8921 tons, and in the year 2012-13 the consumption of petroleum products in lesser figures come 79 tons and highest figure goes to 2103 tons, while the lowest rate demonstrates as -22.3 percent of LSHS and higher petroleum coke goes to 62.1 percent. The general rate in lowest come 1.4 and highest rate goes to 6.7.

[60]Chemin, Elodie Sentenac (2012), "Is the price effect of fuel consumption symmetric? Some evidence from an empirical study", Energy Policy, 41, 59-65.

Products	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	% Growth 2012-13
1. Light Distillates of which	**33662**	**37075**	**38557**	**39878**	**38995**	**41443**	**43870**	**46351**	**5.7**
LPG	10456	10849	12165	12344	13135	14331	15350	15605	1.7
Motor Spirit	8647	9285	10332	11258	12818	14194	14992	15744	5
Naphtha+NGL	1219	13886	13294	13911	10134	10676	11222	12342	10
Others	2356	3055	2766	2365	208	2242	2306	2660	15.3
2. Middle Distillates of which	**54423**	**57595**	**62823**	**66378**	**71120**	**75029**	**79415**	**82795**	**4.3**
SKO	9541	9505	9365	9303	9304	8928	8229	7502	-8.8
ATF	3296	3983	4543	4423	4627	5078	8229	5270	-4.8
HSDO	40191	42896	47669	51710	56242	60071	64750	69174	6.8
LDO	883	720	667	552	457	455	415	399	-3.8
Others	512	491	579	390	490	497	485	450	-7.3
3. Heavy Ends of which	**25129**	**26078**	**27568**	**27343**	**27693**	**24568**	24847	**27382**	**10.2**
Furnace Oil	8921	9257	9469	9419	9145	8807	7548	6317	-16.3
LSHS	3907	3361	3248	3169	2484	1982	1759	1366	-22.3
Lubes/Greases	2081	1900	2290	2000	2539	2429	2633	2685	2
Bitumen	3508	3833	4506	4747	4934	4536	4638	4658	0.4
Petroleum Coke	4928	5441	5950	6166	6586	4982	6138	9947	62.1
Paraffin Wax	268	303	241	230	211	198	211	228	8.2
Other Waxes	105	64	65	65	78	56	56	79	35.4
Others	1411	1919	1799	1574	1716	1578	1863	2103	12.9
Total	**113214**	**120748**	**128948**	133599	**137808**	**141040**	**148132**	**156528**	**5.7**
% Growth	**1.4**	**6.7**	**6.8**	**3.6**	**3.2**	**2.3**	**5**	**5.7**	

Table-3.1: Product-wise Consumption of Petroleum Products 000' tones @ growth.

With the Backdrop on the Energy and oil situation, and numerous limits on the accessibility of the item, the petroleum marketing organizations have focused in enhancing their market share and perceivability through large portions of the focused endeavors on building long-term relationships with the customer. Large portions of the key elements have been referred to in the writing study towards CRM activities and its linkage on business execution.

Indian Oil Corporation

Indian Oil Corporation Limited, or Indian oil, is an Indian state-claimed oil and gas corporation with its central command in New Delhi, India. It is the world's 88th biggest corporation, as indicated by the Fortune Global 500 rundown, and the biggest public corporation in India when positioned by revenue.[61]

Indian oil and its subsidiaries represent a 49% share in the petroleum products market, 31% share in refining limit and 67% downstream part pipelines limit in India. The Indian oil Group of organizations possesses and works 10 of India's 22 refineries with a joined refining limit of 65.7 million metric tons for every year. In FY 2012 IOCL sold 75.66 million tons of petroleum products and reported a PBT of 37.54 billion, and the Government of India earned an extract obligation of 232.53 billion and duty of 10.68 billion.

The company is principally controlled by Government of India which claims approx. 79% shares in the company.[62] It is one of the seven Maharatna status organizations of India, separated from Coal India Limited, NTPC Limited, Oil and Natural Gas Corporation, Steel Authority of India Limited, Bharat Heavy Electricals Limited and Gas Authority of India Limited.

[61]"Global 500".Fortune Global 500.Retrieved 31 Aug 2013.
[62]"Shareholding Pattern".Indian Oil. 31 December 2013. Retrieved 27 January 2014.

Indian oil started operations in 1958 as Indian Oil Company Ltd. The Indian Oil Corporation was framed in 1964, with the merger of Indian Refineries Ltd.

As of late Indian Oil Corp (IOC) has raised $500 million by offering 10-year dollar-designated bonds, it's fourth such issue abroad in the last three and a half years.

The principle products of Indian Oil are petrol, diesel, LPG, auto LPG, flying turbine fuel, ointments and petrochemicals: naphtha, bitumen, lamp oil and so forth.

Indian Oil works the biggest and the greatest network of fuel stations in the nation, numbering around 20,575 (16,350 general Ros & 4,225 Kisan Seva Kendra). It has likewise begun Auto LPG Dispensing Stations (ALDS). It supplies Indane cooking gas to in excess of 66.8 million families through a network of 5,934 Indane merchants. The principle services offered by Indian Oil are Refining, Marketing, Pipelines, R&d and Training. Indian Oil's Research and Development Center (R&d) at Faridabad supports, creates and gives the essential innovation solutions to the working divisions of the corporation and its customers inside the nation and abroad.

Indian Oil has extended its business to petrochemicals, common gas marketing, oil investigation & generation and globalization of downstream operations. It works through 150 regulatory work places

in India and three abroad. It controls 10 of India's 19 refineries and accounts for around 40.4% share of national refining limit. The group refining limit is about 60.2 MMT p.a. The company possesses and works a broad network of unrefined petroleum and petroleum item pipelines. Its pipelines network is about 9,300 km long and 61.72 MMT p.a. in limit. Indian Oil works 16,607 petrol/diesel stations, including 1,422 Kisan Seva Kendra outlets for rustic customers, 6,873 mass purchaser outlets and 3,955 lamp oil merchants.

It works brands like Xtracare, Swagat and Kisan Seva Kendras in the petroleum retail section and Indane LPG, SERVO Lubricants, Auto gas LPG, Xtrapremium Branded Petrol, Xtramile Branded Diesel, Xtrapower Fleet Card, Indian oil Aviation and Xtrarewards in the energy section. It has established aptitude in the R&d section that offers creative products, advances also services covering the whole array of downstream operations. In Fy07, the company authorized a few significant activities, including development of the limit of its Panipat refinery from 6 to 12 MMT p.a., a world scale PX/PTA (Paraxylene/Purified Terephthalic Acid) plant at Panipat for polyester intermediates, MS (petrol) quality up gradation venture at its Gujarat refinery, and the Mundra-Panipat raw petroleum pipeline with inland offices at Mundra for taking care of substantial raw petroleum imports.

Indian Oil has speculation arrangements of Rs 432.5 bn for the following five years. By 2011-12, the Indian Oil Group, with 80 MMT p.a. refining limit would develop as a fare arranged center for completed products. The pipelines network, which gives vital logistics preference to the marketing operations, is likewise situated to cross the 10,000 km stamp soon.

In 1996 the Company felt a requirement for IT re-building as it watched that throughout the years a few need based modules were produced prompting production of islands of data which needed reconciliation over the Company. Towards this the Company selected M/s Price Waterhouse Associates (PWA) (April 1997) after limited tendering as Consultants to the IT re-designing venture (Manthan). The extent of the undertaking comprehensively included creating a corporate IT procedure, definition of configuration parameters for center mix of functional modules to be utilized at all the units of the Company from Board room to the refineries and upcountry sales business locales, creating the obliged system construction modeling, determining the requirements for up gradation and expansion of fittings and programming, incorporating the current modules and new modules and institutionalization and usage of the incorporated system over the Company. The task was to be completed in four stages, specifically, Conceptualization and Design, Development and debugging, Trial Implementation and Stabilization and

Standardization. The undertaking was to be finished in 29 months (i.e. September 1999).

Under the undertaking, the Company, on the exhortation of the Consultants, chose SAP/R3 along with the related oil and gas particular programming IS-OIL and CIN as the ERP solution for customization and usage over the Company, incorporating important functions such as Finance and Controlling, Human Resources, Production Planning, Sale and Distribution, Material Management, Plant Maintenance, Project System and Quality Management. This was to be supplemented with 'add-ons' i.e. additional software solutions, which could be seamlessly integrated into the ERP environment. The 'add-ons' addressed vital functions such as demand forecasting, distribution planning, crude selection and refinery planning.

The Company had implemented (March 2004) SAP/R3 at 292 out of 530 sites scheduled to be completed by September 2002 (as per the initial targets) at a cost of Rs.182 crore (against the initial estimate of Rs.95.95 crore including hardware software and consultancy).

Indian Oil aspires to be Asia's leading commercial R&D organisation in the downstream hydrocarbon sector by building on its capabilities in developing innovative technologies, products and processes, and nodal research in alternative fuels. Beyond core businesses, Indian Oil

is working to emerge as a major player in the petrochemicals business by the year 2011-12, with two petrochemical hubs shaping up at Panipat and Paradip. In natural gas business, it is attempting quantum growth in LNG imports, infrastructure and marketing, besides city gas distribution. In the high-risk business of oil exploration & production, IndianOil's consortium approach with established players is paying off well in terms of exceptional Government support and successful forays in India and abroad. Its current interests are focussed on oil equity and sourcing of natural gas, predominantly from African and CIS countries, by leveraging its downstream capabilities to form joint venture partnerships with reputed enterprises overseas IOC is India's largest commercial enterprise, ranking 135th on the Fortune Global 500 listing.

Bharat Petroleum Corporation Limited

Bharat Petroleum Corporation Limited (BPCL) is an Indian state-controlled oil and gas company headquartered in Mumbai, Maharashtra. BPCL has been positioned 229th in the Fortune Global 500 rankings of the world's greatest corporations for the year 2013.

In 1889 amid incomprehensible modern improvement, an important player in the South Asian market was the Burmah Oil Company. Despite the fact that fused in Scotland in 1886, the company developed out of the endeavors of the Chef Rohit Oil Company, which

had been shaped in 1871 to refine unrefined petroleum delivered from primitive hand dug wells in Upper Burma.

In 1928, Asiatic Petroleum Company (India) began cooperation with Burma oil company. This partnership prompted the development of Burmah-Shell Oil Storage and Distributing Company of India Limited. Burmah Shell started its operations with import and marketing of Kerosene.

On 24 January 1976, the Burmah Shell was assumed control by the Government of India to structure Bharat Refineries Limited. On 1 August 1977, it was renamed Bharat Petroleum Corporation Limited. It was additionally the first refinery to process recently discovered indigenous rough Bombay High.

In 2003, following an appeal by the Center for Public Interest Litigation, the Supreme Court limited the Central government from privatizing Hindustan Petroleum and Bharat Petroleum without the endorsement of Parliament.[63][3] As direction for the CPIL, Rajinder Sachar and Prashant Bhushan said that the best way to disinvest in the organizations would be to annulment or revise the Acts by which they were nationalized in the 1970s.

[63]SAMANWAYA RAUTRAY AND PHEROZE L. VINCENT (March 4, 2011)."Feather in cap for graft fighters".The Telegraph.Retrieved 2012-04-26.

Hindustan Petroleum Corporation Limited

HPCL is a Government of India Enterprise with a Navratna Status, and a Fortune 500 and Forbes 2000 company, with an annual turnover of Rs. 1,90,048 Crores and sales/income from operations of Rs 2,15,675 Crores (US$ 39.726 Billions) during FY 2012-13, having about 20% Marketing share in India among PSUs and a strong market infrastructure. HPCL's Crude Thruput and Market Sales (including exports) are 15.78 Million Metric Tons (MMT) and 30.32 MMT respectively in the same period. HPCL operates 2 major refineries producing a wide variety of petroleum fuels & specialties, one in Mumbai (West Coast) of 6.5 Million Metric Tones Per Annum (MMTPA) capacity and the other in Vishakhapatnam, (East Coast) with a capacity of 8.3 MMTPA. HPCL holds an equity stake of 16.95% in Mangalore Refinery & Petrochemicals Limited, a state-of-the-art refinery at Mangalore with a capacity of 15 MMTPA.

Kochi Refineries Limited

Kochi Refinery, a unit of Bharat Petroleum Corporation Limited (BPCL-KR), is a9.5 MMTPA Refinery located at Ambalamugal in Ernakulam District (Kerala), India. The Refinery was commissioned in 1966 with crude oil processing capacity of 2.5 Million Metric Tons per Annum (MMTPA). Through progressive revamps and addition of

process units, the refining capacity has been augmented to present level of 9.5 MMTPA, incorporating advanced refining technologies.

During 2008-09, the refinery set out on bottoms up gradation project and Environment clearance obtained for the project in Feb 2009. Subsequently, in view of the high demand growth of petroleum products projected in the coming years in the country and also to retain its profitability and competitiveness in the long run, BPCL-KR decided to carry out a Configuration Study and prepare a Prefeasibility report (PFR) for an Integrated Refinery Expansion Project (IREP) with the help of Engineers India Limited (EIL) as Consultant. In addition to enhancement of refining capacity to 15.5 MMTPA, quality up gradation of autofuelsto Euro-IV/ V norms and up gradation of refinery residue to value added products are envisaged as part of the project.

The capacity expansion by 6.0 MMTPA will be facilitated by installing a new state of the art Crude distillation Unit of 10.5 MMTPA so as to replace the existing old4.5 MMTPA CDU-1 which is not energy efficient. Associated process units like Delayed Coker Unit, FCCU, VGO HT, DHT Sulfur Recovery Unit (SRU), Hydrogen Generation Unit (HGU), Sour Water Stripper etc are included in the project.

Propylene based downstream units are proposed in the configuration for utilizing the Propylene generated from FCC.

The feed to the Delayed Coker Unit is Vaccum Residue (VR) from Vaccum columns of all Crude Distillation units. Coker feed is successively preheated against product/ pump around stream and then flows into the bottom of the Cokerfractionator. The feed is joined by the bottom liquid of the fractionator's i.e recycle oil. The combined Coker feed and heavy recycle liquid are pumped from Cokerfractionator to Coker heaters. The prime function of the heaters is to quickly heatthe feed to the required reaction temperature while avoiding premature cokeformation in the heater tubes. Heated liquid is fed to the coke drum, the hot feedcracks to form coke and cracked products. The cracked products leave from the top of the coke drum as a vapour stream to Coker fractionators. The Cokerfractionator separates the coke drum effluent vapour into Coker Gas, LPG,Naphtha, Light Coker Gas Oil (LCGO), Heavy Coker Gas Oil (HCGO) and Coker Fuel Oil. Coker Gas is sent to Fuel Gas treatment unit and finally to the Fuel Gasheader for use as internal fuel. LPG is sent to storage after treatment. CokerNaphtha, HCGO and Coker Diesel are sent to VGO-HT/DHT for treatment. Coke is transferred to Coke yard for sale.

Assam Oil Division (Under IOC)

Assam Oil Company Ltd. (AOC) was one of the earliest enterprises in the world engaged in exploration and production of oil. Oil was discovered in Digboi in northeastern part of Assam in 1889 by Assam

Railway & Trading Company (Originally formed with the object of drilling for oil, later on Assam Oil Company was created to carry out exploration work in Assam and adjoining areas), which established the predecessor company to AOC that was later acquired by Burmah Oil Company Ltd.(BOC), founded 1896, which played a major role in the oil industry in South Asia for about a century through its subsidiaries and in discovery of oil in the middle east though its significant interest in British Petroleum, and also discovered Yenangyaung Oil Field in 1897 and, in 1901, discovered Chauk (Singu) Oil Field, both in Myanmar. Assam Oil Company was taken over by the BOC in 1910, and between 1910 and 1930, the BOC carried out extensive exploration work in Assam and adjoining areas. In 1937, BOC, Royal Dutch/Shell, and Anglo Iranian Oil Co applied for exploration licensee in India and started geophysical survey. Due to World War II, all activities were suspended. Assam Oil is now a division of Indian Oil. under the banner of Assam oil Division (AOD) and is the marketing arm of IOC in the North East India.

Chennai Petroleum Corporation Limited

Chennai Petroleum Corporation Limited (Company) was established in the year 1965.The Company has two refineries one at Manali with a refining capacity of 9.5 MillionMetric Tones Per Annum (MMTPA) and another in Cauvery Basin at Nagapattinamwith a capacity of one MMTPA. The main products of the Company are LiquefiedPetroleum

Gas, Motor Sprit, Superior Kerosene, Aviation Turbine Fuel, High Speed Diesel, Naphtha, Bitumen, Lube Base Stocks, Paraffin Wax, Fuel Oil, Hexane and Petrochemical feed stocks.

The Company introduced VAX (Virtual Address Extension) system in the early 1990susing programmes developed in house which were independent and not integrated. Hence the Company proposed to integrate these systems using Enterprise Resource Planning (ERP). The RAMCO e Applications system was selected on the advice of CMC Limited and implemented during June 2002 at a total cost of Rs.3.77 crore. RAMCO eApplications system uses client server architecture with MS-SQL 2000 as database and Windows 2000 as Operating System.

Chennai Petroleum Corporation Limited (CPCL), formerly known as Madras Refineries Limited (MRL) was formed as a joint venture in 1965 between the Government of India (GOI), AMOCO and National Iranian Oil Company (NIOC) having a share holding in the ratio 74%: 13%: 13% respectively. Originally ,CPCL Refinery was set up with an installed capacity of 2.5 Million Tons Per Annum (MMTPA) in a record time of 27 months at a cost of Rs. 43 crore without any time or cost overrun. In 1985, AMOCO disinvested in favour of GOI and the shareholding percentage of GOI and NIOC stood revised at 84.62% and 15.38% respectively. Later GOI disinvested 16.92% of the paid up capital in favor of Unit Trust of India, Mutual Funds, Insurance

Companies and Banks on 19th May 1992, thereby reducing its holding to 67.7 %. The public issue of CPCL shares at a premium of Rs. 70 (Rs. 90 to FIIs) in 1994 was oversubscribed to an extent of 38 times and added a large shareholder base. As a part of the restructuring steps taken up by the Government of India, Indian Oil acquired equity from GOI in 2000-01. In July 2003, NIOC transferred their entire shareholding to Naftiran Intertrade Company Limited, an affiliate, in line with the Formation Agreement, as part of their organizational restructuring. Currently IOC holds 51.89% while NICO holds 15.40%.CPCL has two refineries with a combined refining capacity of 11.5 Million Tons Per Annum (MMTPA). The Manali Refinery has a capacity of 10.5 MMTPA and is one of the most complex refineries in India with Fuel, Lube, Wax and Petrochemical feedstocks production facilities. CPCL's second refinery is located at Cauvery Basin at Nagapattinam. This unit was set up in Nagapattinam with a capacity of 0.5 MMTPA in 1993 and later enhanced to 1.0 MMTPA.The main products of the company are LPG, Motor Spirit, and Superior Kerosene, Aviation Turbine Fuel, High Speed Diesel, Naphtha, Bitumen, Lube Base Stocks, Paraffin Wax, Fuel Oil, Hexane and Petrochemical feed stocks. The Wax Plant at CPCL has an installed capacity of 30,000 tons per annum, which is designed to produce paraffin wax for manufacture of candle wax, waterproof formulations and match wax. A Propylene Plant with a capacity of 17,000 tons per annum was commissioned in 1988 to

supply petrochemical feedstock to neighbouring downstream industries. The unit was revamped to enhance the propylene production capacity to 30,000 tons per annum in 2004. CPCL also supplies LABFS to a downstream unit for manufacture of Liner Alkyl Benzene. The crude throughput for the year 2012-2013 was 9.742 million metric tons (MMT). The company's turnover for the year 2012-13 was Rs.46842.47 cores and the Profit after Tax was (Rs.1766.84 crores)

Oil and Natural Gas Corporation Limited (ONGC)

Founded on August 14, 1956, Oil and Natural Gas Corporation Limited (ONGC) is the largest Indian public sector company. It is also the second largest Indian company in terms of net profit and the third largest Indian company by market capitalization.

The Government of India has vested ONGC with the responsibility to plan, promote, organize and implement programs for development of petroleum resources as well as the production and sale of petroleum and its products within India. Consequently, it is involved in exploring and exploiting hydrocarbons in 26 sedimentary basins within the country. The most important contribution of ONGC, however, has been its pioneering role in developing the nation's capabilities in exploration and production activities, at a globally competitive level.

Due to these capabilities, ONGC currently produces ~80% of India's crude oil production. It owns and operates more than 11,000 kilometers of pipelines in India and owns other assets across the hydrocarbon value chain in India, and through its joint venture company, ONGC Videsh Limited (OVL), abroad as well.

Oil and Natural Gas Corporation Limited is an Indian multinational oil and gas company headquartered in Dehradun, India. It is a Public Sector Undertaking (PSU) of the Government of India, under the administrative control of the Ministry of Petroleum and Natural Gas (MOP&NG). It is India's largest oil and gas exploration and production company. It produces around 69% of India's crude oil (equivalent to around 30% of the country's total demand) and around 62% of its natural gas. On 31 March 2013, its market capitalization was INR 2.6 trillion (US$ 48.98 billion), making it India's second largest publicly traded company. In a government survey for FY 2011-12, it was ranked as the largest profit making PSU in India. ONGC has been ranked 357th in the Fortune Global 500list of the world's biggest corporations for the year 2012. It is ranked 22nd among the Top 250 Global Energy Companies by Platts.

ONGC was founded on 14 August 1956 by Government of India, which currently holds a 69.23% equity stake. It is involved in exploring for and exploiting hydrocarbons in 26 sedimentary basins of

India, and owns and operates over 11,000 kilometers of pipelines in the country. Its international subsidiary ONGC Videsh currently has projects in 15 countries. ONGC has discovered 6 of the 7 commercially-producing Indian Basins, in the last 50 years, adding over 7.1 billion tonnes of In-place Oil & Gas volume of hydrocarbons in Indian basins. Against a global decline of production from matured fields, ONGC has maintained production from its brownfields like Mumbai High, with the help of aggressive investments in various IOR (Improved Oil Recovery) and EOR (Enhanced Oil Recovery) schemes. ONGC has many matured fields with a current recovery factor of 25-33%. Its Reserve Replacement Ratio for between 2005 and 2013 has been more than one. During FY 2012-13, ONGC had to share the highest ever under-recovery of INR 494.2 million (an increase of INR 49.6 billion over the previous financial year) towards the under-recoveries of Oil Marketing Companies (IOC, BPCL and HPCL).

Oil India Limited

The story of Oil India Limited (OIL) follows and symbolizes the advancement and development of the Indian petroleum industry. From the disclosure of crude oil in the most distant east of India at Digboi, Assam in 1889 to its available status as a completely coordinated upstream petroleum company, OIL has come far, intersection numerous breakthroughs.

On February 18, 1959, Oil India Private Limited was consolidated to grow and create the newfound oil fields of Naharkatiya and Moran in the Indian North East. In 1961, it turned into a joint wander company between the Indian Government and Burmah Oil Company Limited, UK.

In 1981, OIL turned into a completely claimed Government of India venture. Today, OIL is a head Indian National Oil Company occupied with the business of investigation, improvement and generation of crude oil and characteristic gas, transportation of crude oil and creation of LPG. OIL additionally gives different E&p related services and holds 26% value in Numaligarh Refinery Limited.

The Authorized share capital of the Company is Rs. 2000 Crores. The Issued, Subscribed and Paid share capital of the company is Rs. 601.14 Crores. At present, The Government of India, the Promoter of the Company is holding 67.64% of the aggregate Issued & Paid-up Capital of the Company. The equalization 32.36% of the Equity capital is held by Public and others including Bodies Corporate, Mutual Funds, Banks, Fiis, Resident Individuals and so on.

Oil India Ltd. (OIL) has been assuming an important part to meet the energy prerequisites of the nation. The climbing populace and the subsequent increment in requests of petroleum products have put a ton of weight on OIL. Notwithstanding the best exertion of different

petroleum organizations and OIL, the nation needs to import oil from the universal market. The Government of India gives attention for the investigation action.

At present, India's interest for petroleum products is developing at a quick rate and it would achieve a level of 155 MMT by 2006-2007. With a perspective to take care of this developing demand, the investigation activities are quickened ashore and in addition in profound waters. Considering the current request and supply, the level of independence is prone to decrease to around 30% through the following few years. Along these lines, considerable endeavors are required to help the level of investigation movement so new finds can be made and the generation of crude oil & gas can be essentially brought up in the years to come.

Oil India Limited (OIL) is the second largest hydrocarbon exploration & production (E&P) Indian public sector company and operational headquarters in Duliajan, Assam, India under the administrative control of the Ministry of Petroleum and Natural Gas of the Government of India. However, Company's corporate office located in Noida in New-Delhi-NCR region.OIL is engaged in the business of exploration, development and production of crude oil and natural gas, transportation of crude oil and production of liquid petroleum gas. The story of Oil India Limited (OIL) traces and symbolises the development and growth of the Indian petroleum

industry. From the discovery of crude oil in the far east of India at Digboi, Assam in 1889 to its present status as a fully integrated upstream petroleum company, OIL has come far, crossing many milestones. The Company presently produces over 3.6-3.8 MMTPA (million tons per annum) of crude oil, over 7MMSCMD of Natural Gas and over 50,000 Tones of LPG annually. Most of this emanates from its traditionally rich oil and gas fields concentrated in the Northeastern part of India and contribute around 80% of total Oil Gas produced in the region.

The company has over 100,000 square kilometers of license areas for oil and gas exploration. It has emerged as a consistently profitable International company and present in Libya, Gabon,Nigeria, Sudan, Venezuela, Mozambique, Yemen, Iran, Bangladesh and USA. OIL has recently emerged in the offshore giant gas-field project of Mozambique and also made discovery of oil & gasin Gabon as an Operator and Libya as non-operator. OIL acquired Shale oil asset in USA during 2012. In recent years, OIL has stepped up E & P activities significantly in the North-East India. OIL has set up the NEF (North East Frontier) project to intensify its exploration activities in the frontier areas in North East, which are logistically very difficult and geologically complex. Presently, exploration activities are in progress along the Trust Belt areas of Arunachal, Assam including Mizoram. The Company operates a crude oil pipeline in the North East for transportation of crude oil produced by both OIL and ONGCL in the

region to feed Numaligarh, Guwahati, Bongaigaon and Barauni refineries and a branch line to feed Digboi refinery.

3.3 INDUSTRY STRUCTURE AND DEVELOPMENTS

Maybe no other sector of Indian economy was such a great amount of ignored amid the British administration as oil. It was widely accepted that with the exception of Digboi in Assam, there was no oil somewhere else in India. Indeed Digboi stayed ignored till 1921 when Burmah Shell turned into its holder. The principal refinery was constructed by the Assam Railway and Trading Organization in 1883 at Margherita. After the revelation of oil in the Digboi field, another refinery was authorized in 1901 and the first lamp fuel from it was advertised in December 1901. On the marketing side the Asiatic Petroleum Company entered the Indian showcase in 1903 and later in 1921 the Burmah Oil Company (BOC) began marketing in India. The Burniah Shell Company which was structured in January 1928 furthermore the Standard Vacuum Oil organization (SVOC) which started its operations in September 1933 manufactured broad systems of appropriation offices all through India.

Esso came to India on March 31, 1962 when the SVOC was rearranged and named Esso Standard Eastern India, completely claimed by the Standard Oil Company (New Pullover). The other real marketing companies were the Caltex Company (mutually claimed

subsidiary of Standard Oil Company of California and Texas Oil Company), the BOC (India Trading) Ltd, the recent working solely in Assam and later known as the Assam Oil Company (AOC).' Thus the whole oil industry in India was under the control of one or the other major universal organization. This was the position in the whole non-Communist world, where seven companies known as the "Seven Sisters" ruled the oil industry. These companies, additionally alluded to as the universal majors, were the five US titans, Exxon, Gulf, Texaco, Mobil and Socal (Standard Oil of California, later renamed Chevron), one British organization (British Petroleum) and one Somewhat English Dutch organization (Royal Dutchishell).

On the eve of autonomy, India's interest for petroleum items was to the tune of around 2.2 million metric tons (mmt), of which approximately 0.2 mmt were created in the nation and the parity was foreign made. In 1947 the creation of crude was 2,51,100 tones. For quite a while considerably after Independence, the Government of India took no genuine enthusiasm toward oil investigation. Some way or another, the organizers had almost no confidence in the plausibility of a significant oil revelation and the beginning country's specialized ability was considered insufficient to attempt any investigation. More consideration was accordingly given to refineries where there was no danger component.

The parity of installments issue, the developing level of oil consumption and the requirement for independence in the major petroleum items amid the years after the Second World War made the Government to allot a huge part to refinery development in the national economic plan. Table 3.2 which uncovers a sensibly steady reserves1 generation proportion through the years is a record of ONGC's exertions to match the pace of investigation with the expanding creation and consumption. There has been a noteworthy growth of the recoverable stores of both crude oil and natural gas, especially after 'he disclosure of Bombay High. Despite the fact that generation has additionally been relentlessly on the ascent, the holds 1 generation degree has stayed pretty much consistent around 25 due to the disclosure of new saves. The physical criticalness of the proportion lies in the way that in the event that creation proceeds at the current level and no more holds are found, the current stores will keep going just for 25 years. The requirement for quickened investigation can't be overemphasized.

Year	Balance of recoverable reserves		Production		R/P Ratio	
	Crude mmt	N.Gas bcm	Crude mmt	N.Gas bcm	Crude Oil	Natural Gas
1947-48	4.00	3.00	0.25	N.A.	16.00	
1950-51	4.00	2.00	0.26	N.A.	15.38	
1960-61	45.00	22.00	0.45	N.A.	100.45	
1966-67	153.00	63.15	4.65	N.A.	32.92	
1970-71	127.84	62.48	6.82	1.45	18.74	43.24
1975-76	143.90	87.67	8.45	2.37	17.03	37.02
1980-81	366.33	351.31	10.51	2.36	34.87	148.99
1985-86	499.51	478.63	30.17	8.13	16.56	58.84
1990-91	738.80	686.45	33.02	18.00	22.37	38.14
1991-92	806.15	729.79	30.35	18.65	26.57	39.14
1992-93	801.05	735.46	26.95	18.06	29.72	40.72
1993-94	779.06	717.95	27.03	18.34	28.82	39.15
1994-95	765.00	707.00	32.23	19.38	23.74	36.48

Note: Reserves as on 1st January of initial year
mmt = Million metric ton
bcm = Billion cubic metres
N.A. = not available

Table 3.2: Reserves and Production of Crude Oil and Natural Gas.

The Oil Industry Planning Group set up in 1994 under the Chairmanship of U.sundararajan, Chairman and Managing Director, BPCL assessed that the current refining limit deficit of 9.8 mmt would increment to 12.5 mmt by 2006-7. It was anticipated that the interest for POL items would be 124.1 mmt versus the present level of 64 mmt. The venture needed to create the foundation for taking care of this volume of items is in the scope of Rs.42,000 crores to Rs.58,000 crores.

As indicated by the Committee gauges, in 2006-7, the aggregate refining limit would be 11 1.6 mmt, embodying 67.3 mmt in the public

sector, 27.6 mmt in the joint sector furthermore 16.7 mmt in the private sector.

Expecting that the proportion of oil imports to aggregate fare income proceed to stay at around 32 for every penny and the cost of oil in the global business would not be higher than $22 for every barrel by the year 2010 1, India's POL import bill is likely to achieve a level 3 or 4 times the present level, contingent upon which of the different projections of interest works out. Separated from the equalization of installments issue, this will make the nation more powerless against sudden treks in oil costs.[64]

3.4 DEREGULATION IN THE PETROLEUM SECTOR IN INDIA

The late moves of the legislature to slowly deregulate the Petroleum, Oil and Lubricants (POL) sector in India as a component of the plan of 'neo-liberal change' has created discontent among the individuals. In the run-up to finish deregulation, there are examples of expansion in the household cost of POL items that are proportionately more than the ascent in their worldwide costs. In the latest occurrence (of thirteenth September, 2012), the diesel cost was raised by Rs.5 for every liter at one go, even without any ascent in worldwide costs. These steps are continuously taken to dispense with the legislature subsidy on these items in an orderly way. Deregulation of the POL

[64]Parikh, Jyoti., Purohit, Pallav. And Maitra, Pallavi., (2007), “Demand projections of petroleum products and natural gas in India”, Energy, 32, 1827-1837.

sector is certain to dispense with the direct or indirect subsidies totally. Furthermore diminishment in subsidy, as indicated by the legislature, is the need of great importance keeping in mind the end goal to diminish the fiscal deficit as extent to GDP[65].

Deregulation is likewise required in the current neo nature's domain since if the administration continues financing the public sector possessed oil marketing companies (Omcs) like Indian Oil, Hindustan Petroleum and Bharat Petroleum, then the privately owned businesses like Reliance and others would not get a 'level playing field' and they would not have the capacity to contend in cost. Thusly, the present subsidy administration indirectly limits the private players from entering the oil marketing sector. Consequently, if the needs of the administration in force are the lessening of subsidies and guaranteeing a 'level playing field' for private players as opposed to containing swelling and producing occupation and development, it would pick a policy of deregulation.

"A business sector decided pricing framework for petrol and diesel could be managed in the long-run by giving level playing field and advertising rivalry among all players, public furthermore private, in the oil and gas sector" (Kirit Parikh Committee Report, 2010). Before taking a position either in support or against the value trek and subsidy decrease, which would inevitably lead to the deregulation of

[65]Bhanumurthy, N.R., Surajit Das & Sukanya Bose, (2012) "Oil Price Shock, Pass-through Policy and its Impact on India" NIPFP working paper No. 2012-99, March.

the whole POL sector in India, it would be valuable to look at some essential truths about this sector with the assistance of statistics gave by different wellsprings of the government.

The aggregate yearly sales of all POL items by the industry in India has been evaluated to be roughly 1480 lakh metric ton amid economic year 2011-12. All out crude oil handled by refineries possessed by Indian Oil Corporation Limited (IOCL), Hindustan Petroleum Corporation Limited (HPCL), Bharat Petroleum Corporation Limited (BPCL), Chennai Petroleum Corporation Limited (CPCL), Oil and Natural Gas Corporation (ONGC), Reliance Industries Limited (RIL) and Essar Oil Limited (EOL) was 2037.5 lakh metric ton amid 2011-12.

The aggregate import of crude was 1717 lakh metric ton and aggregate imports including some petro-item imports was 1867 lakh metric ton. The fare of petro-items was 608 lakh metric ton, making net imports give or take 1260 lakh metric ton amid last money related year. In this manner, treating the yearly industry sales of 1480 metric ton to be a substitute for household ingestion, it develops that more than 85% of residential consumption in India is met by net import of POL items and just 15% is created locally. In worth (rupee) terms, on a normal, POL imports constitute 17% of aggregate import in India. India's import interest of crude constitutes just about 9% of World export/import of crude.

Vigorously oil importing nations like India would naturally be helpless against developments in the worldwide cost of crude oil (see the diagram beneath). The normal universal cost of the bushel of crudes foreign by India expanded steeply from Us$26.65/bbl in 2002-03 to Us$83.57/bbl by 2008-09. It mollified a bit to Us$69.76/bbl in 2009-10 however went up again to Us$85/bbl in 2010-11 and to a high of Us$112/bbl amid 2011-12 (yearly normal). This postures a genuine test to macroeconomic steadiness. The conversion standard has additionally deteriorated subsequent to 2007-08 to a normal of Rs.48/Us$ on a normal amid 2011-12. Generally, a generous bit of any universal oil value stun was consumed by the legislature and not passed on to the consumers as a result of its inflationary results and in addition unfavorable impacts on development.

As the Chaturvedi board of trustees (2012) exceptional, regarding Us$, the global cost of the Indian crate of POL imports went up by 3.5 times between December 2003 and June 2008; though, the residential costs of engine soul and high velocity diesel (HSD) in India went up by just 1.5 times amid this period. The administration chooses the business value and remunerates the oil marketing companies for the deficit from the import equality cost i.e. the distinction between the governments administered selling cost and the global cost paid if the completed POL items had been transported in directly. In spite of the fact that, the import equality cost could be higher than the cost warranted by the expanded expenses of transported in crude and is in

this manner a "notional" substitute, if the legislature does not remunerate them anon this premise, the oil marketing companies would incline toward trading their POL items instead of selling them in the household market at much lower costs.[66]

This crevice between the local cost and the import equality value (or fare or exchange equality cost) of POL items duplicated by the units sold in the household business sector constitutes the downright 'under recuperation'. Some piece of the under recuperations are ingested by the public sector (upstream also downstream) companies and the rest is financed by the legislature through government ensured oil-bonds and direct oil subsidies. Then again, the Central government forces extract also custom duties on oil and the state governments force sales tax on petro-items, which are reflected in the last cost of these items and help significantly (around 20% of Focus' and 10% of States' aggregate revenue) into the administration exchequer.

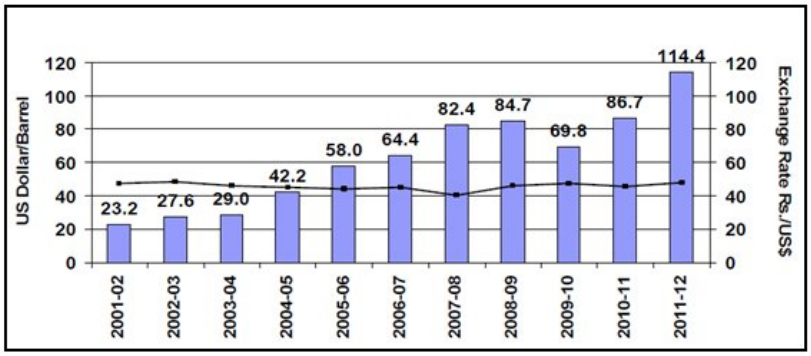


Fig 3.3: Movements in International Price of Crude Oil.

[66]Chaturvedi Committee Report, (2008) "Report of the High-Powered Committee on Financial Position of the Oil Companies", Govt. of India.

It is imperative to note here that while the figuring of under recuperation is focused around notional import equality costs, some piece of the under recuperation is additionally assimilated by the upstream and downstream companies and does not get reflected in either the subsidy bills of the administration or in an increment in the supply of oil-bonds. Beyond any doubt the oil subsidy is given singularly by the focal government. Be that as it may, 60% of the aggregate revenues receipt from this sector likewise comes to focal exchequer and the states get short of what 40%. The aggregate subsidy does not cross 35% of revenue receipts of the focal government from POL.

Yet, whether any additional subsidy would offer ascent to an increment in fiscal deficit or not would rely on upon whether the ascent in use is bigger than the increment in revenue or not. In 2009-10 and 2010-11, the increments in subsidies have been much lower than the contemporaneous increments in the commitment of the POL sector to both the joined exchequer and also the focal exchequer. In the event that we take a gander at the financing of the aggregate under recuperation, we see that the rebates given by the upstream companies secured 30-40% of add up to under recuperation. Prior, the trouble of whatever remains of the under recuperation used to be

borne by the Omcs, yet that commitment has been continuously cut down to an unimportant 10%.[67]

[67]Economic Division, Ministry of Petroleum & Natural Gas (2012), "Basic Statistics on Indian Petroleum & Natural Gas 2010-11"

CHAPTER - 4

CUSTOMER RELATIONSHIP MANAGEMENT: A CASE STUDY OF PETROLEUM INDUSTRY

4.1: CUSTOMER RELATIONSHIP MANAGEMENT FOR ENERGY INDUSTRY

While it is comprehended that overseeing customer relationships obliges a mixture of approaches, the technology to drive customized connections through knowing and understanding your customers has just as of late developed enough to meet the requests of the energy industry. Today, CRM can have a stamped effect in fostering more beneficial and additionally fulfilling customer relationships. By picking CRM to address present and future customer relationship needs, forward-looking utility companies are planning to work in deregulated energy markets. CRM results concentrate on front-office business issues utilizing the most recent innovations to coordinate data from divergent systems all through the whole energy undertaking. By leveraging venture wide data, energy organizations are benefitting from decreased adjusting expenses, focused on marketing battles, and enhanced sales.

"Genuine CRM involves managing customers exclusively or as one of a kind groups, and includes coordinating all systems that touch the

customer, from charging to the call focus to sales and marketing." While there is some union in the middle of CIS and CRM, CRM stays unique in light of the fact that it:

- Focuses on front-office connections while coordinating with back-office transactions.
- Automates and oversees marketing, sales, and administration capacities.
- Optimizes customer connections crosswise over numerous channels.
- Uses venture wide data for examination of customer and channel benefit.
- Expands the meaning of customer to incorporate prospects.

Obviously, organizations can develop and adjust customer data systems to give more customer-driven usefulness, however custom software development is lavish and prolonged. Instead of supplanting existing CIS, CRM is an alluring supplement that can improve your present and future technology speculations. To guarantee quick execution, heading CRM sellers give extensible schemas that incorporate business methodologies and data from over the front-and back-office with next to zero customization. This blend of CRM also

CIS guarantees that energy companies can influence all customer data for an extensive and predictable methodology to marketing, sales, and administration.

As a direct aftereffect of deregulation, numerous energy companies are securing or strengthening their marketing offices to instruct customer and business customers about their services and offerings. CRM can expand the adequacy of these new marketing activities through customized marketing abilities. By looking over the abundance of customer data you have, CRM systems can segment customers by sort, use examples, administration history, buy history, and more.

Instead of covering a customer base with bland messages and offers, watchful segmentation can enhance communications adequacy by guaranteeing that important messages are arriving at proper crowds. Marketing computerization tools can help you start and oversee multichannel, multiwave fights, for example, a direct mail piece that highlights new regulations, bill additions offering new electrical items, associate advertising encased with the receipt pushing packages or occasions, and emails showcasing internet charging alternatives.

Through CRM examination, marketing supervisors can screen the battle's general adequacy and make ongoing changes, for example, leveraging lower-cost channels for failing to meet expectations crusades or broadening exercises for battles that are surpassing

desires. By shutting the crevice between crusade execution and crusade investigation, advertisers can modify their offers, messages, and communications progressively.

The deciding result: extended piece of the overall industry, expanded customer maintenance, what's more enhanced net revenues.

As per the report cited in the BRICS*, India shall be the leading economic power in the world in another 20 years because of the human index. Therefore, the humans or the customers shall hold the future of any company. In the energy sector, our focus and our efforts shall be restricted to the field of petroleum for this research activity.

The changing global energy market and regulatory environment have focused a harsh spotlight on operational risks, health, safety, security and environment (HSSE). Successful energy companies need to stay ahead of industry trends and be able to respond to legislative and market changes quickly and efficiently.

Energy and utility sector is relying on information technology solutions like never before to solve some of the business challenges. Specifically, CRM technology has a special meaning for utility and energy companies which often operate under tightly regulated monopolies and cater to clients who have very limited options in terms of providers. Utility companies have long made CRM as part of their business strategies, and technology has recently advanced to the point

where they can power up customer relations through analytics and tighter integration between infrastructure systems, customer data, emergency preparedness, energy distribution and consumption, energy trading, compliance and incident management etc

CRM has become business critical application because it's the underlying premise of the new delivery model that utility companies are leveraging. Many utility companies are looking at back-end database integration solutions that link collected data with customer information and service requests. "If you look at the number of devices and the amount of data these companies are taking in -- both from a technical and customer side of things, such as electric meters, transformers, and customer data from a CRM system -- this is a huge asset that utility companies are trying to leverage to make better informed business decisions and gain competitive advantage.

Utility & Energy industry needs a robust business technology solution to address some of these challenges:

- Help build customer loyalty by delivering consistent, high-level customer service across all channels.
- Identify high-value clients and take advantage of new revenue opportunities.
- Utilities and Energy companies need strong integration between mature CRM systems and billing applications. There are no

standard integration objects available leading to bespoke application development.

- Traditionally, the Utility companies have operated with disparate customer care and billing applications. These applications support minimal CRM functionalities. Consequently, they do not provide a holistic, integrated customer view.
- Maintaining and growing the energy supplies to provide access and meet future demand with a reduced environmental impact will require substantial long-term investments
- Develop organization-wide CRM infrastructure for lead management, claims management, sales management, customer data management and Partner Relationship Management (PRM)
- Need for segmenting customers for collections, service calls, and infrastructure monitoring to predict potential power failures.
- Ability to detect trouble spots and speeding the dispatch of work crews
- Track case details, ensure the capture of faulty products and resolution details, and enhance customer satisfaction
- Efficient inventory management system to capture all products, the availability of quantity and quantity requested
- Efficient budgeting, claims and returns management system
- Efficient collaboration tool with other public service entities
- Provide centralized system for emergency preparedness, training and servicing.

- Extend the value of IT investment by integrating with legacy core systems and existing applications.
- Remove information silos with real time accurate business information anytime on any device.
- Manual workflows across multiple departments
- Manage compliance and risk management

Our Energy Utilities and Services-CRM offerings include:

Experienced and competent resource pool drawn from leading engineering and management schools and industry experts.

Complete range of service offerings, including business and technology consulting, customer operations strategy, CRM road map definition, package evaluation, implementations, upgrades, rollouts, support and maintenance.

Industry vertical-specific competency team developing pre-built solutions, frameworks, methodologies and templates that can reduce the project execution costs by 15-20%. Proven excellence in Energy Utility and Services including the successful execution of large and business critical engagements in Utility & Energy sector.

In this fast-changing environment, successful energy companies need to stay ahead of industry trends and be able to respond to legislative and market changes quickly and efficiently. Whether you're a new

entrant to the energy industry looking to attract customers and make profits or an established one that needs to find ways to retain customers, you need to be able to successfully compete in today's dynamic, open market.

The traditional model of state-owned energy companies continues to be challenged. A combination of factors is leading governments to conclude that utilities can be satisfactorily, and more efficiently, delivered by wholly or partially private enterprises. This provides access to new sources of capital and technical expertise and facilitates faster market changes. Table 4.1 depicts the trends that are currently affecting energy companies.

Whether state-owned or shareholder-focused, energy companies are increasingly subject to the developing needs of their customers. Consumers demand quality services at reasonable prices and are increasingly offered more choices as to how they purchase public services. This places even more pressure on energy companies to be aware of and respond to market forces. It also means they must find methods to better manage their revenue streams. The challenge that competition creates is how to accommodate the increased complexity of business processes while improving customer service and reducing costs.[68]

[68]A White Paper on the Trends in Electricity and Other Utility Industries, Utilities Domain Competency Group (DCG), March 2000.

Force	Impact
Deregulation • Breaking up of monopolies • Privatization	**Competition**—choice of supplier, creation of metering/other services. **New market**—GENCO, TRANSCO, and DISCO; ESP; PX; ISO. **Customer focus**—attract and retain customers, customer focus. **Energy trading**—creation of retail market and increase in wholesale.
New technologies	**Improved service**—new services, more options and features. **Cost reduction**—through application of technology.
New economy • Globalization • Internet	**Cost reduction**—pressure to keep costs low. **Mergers and acquisitions**—strategic alliances around the globe. **Diversification**—expand business portfolio into related areas.
Environment	**Clean energy focus**—new plants, more research initiatives. **No nukes**–slowdown in developed countries in nuclear plants.

Table 4.1: Force and impact summary.

Beginning in 1978 with the passing of the Public Utilities Regulatory Policy Act (PURPA) through today with the new Federal Energy Regulatory Commission (FERC) proposal for standard market design (SMD), deregulation initiatives have propelled the energy industry to adapt to a more entrepreneurial, customer-centric style of business. The base concept of SMD is free market pricing and open competition. This new competitive environment is putting additional pressures on expense control, internal integration, and business process efficiency.

Before a company can be ready to face deregulation, it has to:

- Understand the new market entities—mainly energy service providers (ESP) and other service providers.
- Display/print these new entities in screens and reports.
- Build various interfaces with these new entities—bills, reads, and so on.
- Add new business processes to support switching of suppliers and revert to utility distribution company (UDC).

Apart from these, the utility usually defines its own scheme for the new market.

These usually call for:

- Changes to bill engine and rate structure.
- Customer-focused approach to processes and transactions.

Deregulation and its inherent risk of customer churn are forcing the energy industry to reevaluate the way they do business. “For energy companies to remain competitive in a deregulated industry, they must leverage customer touch points, broaden the CSR’s role via technology, and create a panoramic customer view, enabling superior customer account management and reducing costs.”3 To build stronger customer relationships, leading energy companies are placing new emphasis on understanding their customers and investigating various customer interaction channels. As part of this customer-centric evolution, energy companies are focusing their attention on

software platforms that foster closer customer relationships, enhance customer service, and reduce costs.

What kinds of solutions should you consider to help you succeed in today's energy market? Many energy companies are evaluating various options to address their customer management requirements such as enhancements to their legacy systems, upgrades to their existing customer information systems (CIS), or investment in customer relationship management (CRM) solutions. Given those three choices, what are the evaluation criteria you should use? When evaluating these options, you should consider if the proposed solution:

- Streamlines customer service through multichannel interactions.
- Captures customer contact history, provides access to service order status, and integrates with field service operations.
- Predicts customer behavior and facilitates targeted marketing campaigns.
- Integrates tightly with billing and operational systems.
- Provides the flexibility to adapt to regulatory changes and evolving business processes.
- Meets your short-term goals as well as your long-term strategies.

Ultimately, you need a solution that will enable you to manage costs, understand your customers, and adapt to deregulation changes. Before making your decision you should consider the tradeoffs

between solutions and the impact it will have on your business (see Table 4.2).[69]

Legacy Systems (Premise-Centric)	Traditional CIS	Customer Relationship Management (Customer-Centric)
Expensive to modify and adapt.	Inflexible to modify.	Built for changing business processes.
Built for specific processes.	Provides core billing, provisioning, and account management functionality.	Easy integration to existing operational systems.
Often exchange data is processed in batch mode.	Offers combination of batch and real-time data exchange.	Delivers real-time data exchange.
Unable to manage web and email communications.	Unable to manage web and email communications.	Improves employee productivity
Difficult for employees to use.	Lacks marketing and customer analytics functionality.	Provides ability to manage multichannel customer interactions.
Lacks marketing and customer analytics functionality.		Offers marketing and customer analytics functionality.

Table 4.2: Comparison of customer management systems.

While it is understood that managing customer relationships requires a variety of approaches, the technology to drive personalized interactions through knowing and understanding your customers has only recently matured enough to meet the demands of the energy

[69]Turning Down the Heat on the Utility Call Center, Meta Group Research, January 17, 2002.

industry. Today, CRM can make a marked difference in fostering more productive and more satisfying customer relationships.

According to Forrester Research, 25.6 percent of North American utilities have completed a CRM deployment or have a rollout underway.[70] By choosing CRM to address current and future customer relationship needs, forward-looking utility companies are preparing to operate in deregulated energy markets. CRM solutions focus on front-office business problems using the latest technologies to integrate information from disparate systems throughout the entire energy enterprise. By leveraging enterprise-wide data, energy organizations are profiting from reduced servicing costs, targeted marketing campaigns, and improved sales. “True CRMentails dealing with customers individually or as unique groups, and involves integrating all systems that touch the customer, from billing to the call center to sales and marketing.”[71] While there is some convergence between CIS and CRM,CRM remains distinct because it:

- Focuses on front-office interactions while integrating with back-office transactions.
- Automates and manages marketing, sales, and service functions.
- Optimizes customer interactions across multiple channels.
- Uses enterprise-wide data for analysis of customer and channel profitability.

[70]CRM Profile: Deployment Across Industries, Forrester Report, July 2002.
[71]Smith, L. Dennis. Where the Upgrades Are, Energy Customer Management, May/June 2002.

- Expands the definition of customer to include prospects.

Of course, organizations can extend and adapt customer information systems to provide more customer-centric functionality, but custom software development is expensive and time-consuming. Rather than replacing existing CIS, CRM is an attractive complement that can enhance your current and future technology investments. To ensure fast implementation, leading CRM vendors provide extensible frameworks that integrate business processes and data from across the front-and back-office with little or no customization. This combination of CRM and CIS ensures that energy companies can leverage all customer information for a comprehensive and consistent approach to marketing, sales, and service.

As competition in the energy market increases, leading utilities are looking to improve customer service as a proactive means to avoid more stringent regulations. Contact center technologies like email response management systems (ERMS),interactive web chat, internet self-service, computer telephony integration (CTI),interactive voice response (IVR), automatic call distribution (ACD), and so on help improve your customer interactions while reducing support costs. Since deregulation has caused increased competition and territory encroachment by new players, utilities need to consider technology as a business strategy for success.

While legacy systems limit the ability for service agents to react quickly or to access real-time customer information, CRM lets you deliver a higher level of service by infusing customer interactions with a comprehensive view of each consumer or commercial customer.

In addition to providing high-quality service, representatives can react more intelligently when interacting with customers. “For utility companies to remain competitive in a deregulated energy industry, they must evolve their call centers from complaint departments to customer interaction centers.” For example, during a customer interaction, customer service representatives can exploit opportunities surfaced by the CRM systems to suggest a better rate plan based on monthly usage patterns, win over likely churn candidates, or arrange the best payment options.

In petroleum sector, India is also showing early signs of aligning with global trends in petro-retailing with forces working as depicted in fig 4.1. The market is becoming dynamic because of the changing need and expectations of the customers and entry of new players. Moreover, as per the global trend, the market is slowly moving towards increasing revenue from non-fuel related and further intensifying the competition within the companies to garner maximum market share.

Fig 4.1: Factors Impacting the Change in Petro-Retailing

4.2 PSU PETROLEUM MARKET: THE CRM PURSUITS

Since beginning, the Central Public Sector Enterprises (CPSES) have been the backbone of the Indian economy and were situated up with the order to i) serve the expansive macro-economic targets of higher economic development, ii) attain independence in generation of merchandise/ services, iii) encourage long haul harmony in equalization of installments and iv) guarantee strength in costs and make benchmarks at costs of fundamental things.

Verifiably, CPSES accept noteworthy significance to India's economy, both in preand post freedom period. In the preindependence time, the public sector endeavors were bound essentially to choose sectors including Railways, Posts & Telegraphs, Port Trust, Ordnance Factories, and so on. In light of the Public Enterprises (PE) Survey, 2008-09, as on March 31, 2009, 213 CPSES out of a sum of 246

CPSES work in five sectors/ related groups, in particular, i) Agriculture, ii) Mining, iii) Manufacturing, iv) Electricity and v) Services.

Dissection of the piece of the overall industry of CPSES further demonstrates that, inside these sectors, the key industries where CPSES have noteworthy/ overwhelming share incorporate i) Coal and Crude Oil in the mining sector, ii) Petroleum (Refinery and Marketing) in the assembling/ preparing sector, iii) Power Generation in the electricity sector and iv) Telecommunications in the services sector.

Crude Oil and Natural Gas is an alternate industry inside the mining sector described by critical vicinity of CPSES. Be that as it may, with the presentation of New Exploration Licensing Policy in 1999, the industry has seen huge change with private players steadily picking up toehold in the industry.

- As far as share in oil and gas creation, CPSES help around 81 % of the aggregate household generation in FY 2009. Key players incorporate Oil & Natural Gas Corporation (ONGC) and Oil India Ltd. (OIL) representing 89% and 11% share of the aggregate generation individually

- Among the non CPSES, the key players incorporate private majors like Reliance Industries Limited, Gujarat State Petroleum Corporation, Cairn Energy India Ltd, Essar Oil Ltd, and so on.

- ONGC was consolidated in 1993 and is occupied with investigation and creation of hydrocarbons to help and to guarantee long haul energy practicality of India. It is as of now the biggest Crude Oil and Gas delivering organization in India, helping in excess of 70% of the Oil and Oil Equivalent Gas (OEG) generation in FY 2009

- Globally, ONGC positions third among the Oil & Gas investigation and creation companies in the world and is 23rd among the main global energy majors according to Platt's 250 Global Energy Companies List for the year 2009

- ONGC has been presented the ‘maharatna' status and helps almost 5% of aggregate CPSE turnover. Further, it positions first as far as net benefit in FY 2009 among all the CPSES with the net benefit recorded at Rs. 16126 crores

- ONGC is principally included in Exploration and Production (E&p) exercises, oversaw through 12 Assets for oil and gas creation exercises and 7 Basins for directing investigation exercises.

- As far as creation proficiency, ONGC is one of the least cost Exploration & Production companies, with its normal lifting and discovering expense being even from an optimistic standpoint in class International companions

- With a perspective to protect itself from the inborn danger of E&p exercises, resulting to disassembling of APM administration, ONGC is taking activities to have vicinity over the whole hydrocarbon quality chain going forward Because of huge control on costs through Administered Pricing Mechanism (APM) by the Central Government, the CPSES have customarily had a solid decent footing in the petroleum refining and marketing industry. Then again, the share of the private sector is relied upon to increment continuously with the authorizing of RIL's fare situated refinery at the Jamnagar Special Economic Zone (SEZ).

- In terms of share in petroleum refining and marketing, CPSES helped around 70 % of the aggregate local generation in FY 2009. Among the CPSES, Indian Oil Corporation (IOC) is the business sector pioneer with 54% piece of the pie emulated by Bharat Petroleum Corporation Ltd. (BPCL) with 20% piece of the overall industry. Other key players having critical vicinity incorporate Hindustan petroleum Corporation Ltd. (HPCL) and Oil & Natural Gas Corporation (ONGC).

- Among the non CPSES, the key players incorporate private majors like Reliance Industries Limited, Essar Oil Ltd, and so on.

- IOC was fused in 1964 with the order to serve the national enthusiasm toward Oil and related sectors and to upgrade the

nation's independence in Oil refining. It is presently the biggest downstream organization in the Oil and Gas Sector in India, representing around 46% piece of the overall industry in FY 2009

- Globally, IOC positions third among the petroleum refining and marketing organization according to Platt's 250 Global Energy Companies List for the year 2009

- IOC has been presented ‘maharatna' status and helped about 21% of aggregate CPSE turnover and around 38% of the aggregate CPSES commitment to the national exchequer by method for taxes and duties. Further, the organization was among the ten most astounding benefit making organizations in FY 2009 among all the CPSES with its net profit at Rs. 2950 crores.

- IOC is essentially occupied with refining and marketing of petroleum items. Notwithstanding petroleum refining, they are included in transportation of crude and petroleum items through its pipelines, innovative work, mixing and generation of greases. The Company's operations incorporates 6 subsidiaries and 13 budgetary joint wanders (JVS) in the field of petroleum and petrochemicals

- Continuing with its quest for creating Green innovations, the organization took off new advances, amid FY 2009 for profound desulphurization of gasoline and diesel streams

- With a specific end goal to meet the redesigned fuel prerequisites according to the Auto fuel policy of the Government, IOC has set out on fuel quality up-degree activities to guarantee supporting its initiative in the refinery and marketing sector.

Customer satisfaction and relationship management are key to a company's overall success. While factors such as quality, expertise, technology and innovation continue to play critical roles, customer satisfaction and relationship management are determining factors in retaining client business. In an effort to focus more on the customer, oilfield services companies are launching static customer surveys for which results are delayed and rarely reach the intended respondents. However, customer satisfaction surveys fall short of providing actionable information. As organizations wait for data collection and analysis, valuable time is wasted and "at-risk" customer relationships remain undetected.

The oilfield presents more complications than most industries. Respondents are harder to find, they have busy schedules, and most reports on the market provide very small sample sizes. Oilfield executives likely challenge results, but pay attention to industry ratings and "seals of approval." There is no doubt that customer satisfaction measurement is important. But equally critical is who you talk to, how and when you conduct the survey and what you do with the results.

Customer Relationship Management. The oil industry lags behind most others in customer relationship management (CRM). Apart from minor leveraging of credit cards and Mobil's SpeedPass, there are few examples of oil company success in developing customer loyalty. QuikTrip, Wal-Mart and grocery stores all have customer relationship models that are far superior to those of the oil companies. Any oil company that masters CRM technology and culture will have a sustainable advantage over its traditional peers.

The petroleum Sector has been a PSU dominated sector, the downstream oil marketing companies have undergone a major changeover thanks to the privatization and deregulation of the sector. Entry of new entrants like SHELL, RELIANCE, NRL, ESSAR etc have brought Greenfield retail networks along with modern retailing concepts of international standards in India. Companies are bringing 'experiences' for the customer at these retail network and new strategies have been formulated at the drawing boards of all the oil majors to look at quick adaptation to higher customer expectations and newer formats are being planned to entice the customer. While competition and customer expectation are one part of it, companies are looking at newer ways to improve their business performances.

The market offered little scope for differentiation due to the nature of the product, prices were low due to intra-country competition and availability was a prerequisite due to a number of alternative suppliers. Although the company was manufacturing finished products at its two refineries and many manufacturing plants, yet, there was still the need to improve operational efficiencies. The profit target from business operations was not commensurate and the company identified that it needed to reduce its overheads and improve the management of its operations. The company had been working with a software package, which has been developed way back in 1964, which originally satisfied the operational efficiency.

The core operations like accounting and other sales modules were centrally processed at the corporate /regional headquarters and then reports were prepared. However, mounting pressure from the customers to have an online system for the products availability, inventories and pressures particularly from the sales team in view of the ongoing competition made company to undertake BPR exercise and thereby leading to ERP implementation and thus emergence of CRM practices.

However, looking at the CRM models as disposed by leading oil companies, it was obvious that they were following a common approach to the CRM business models. The fig 4.2 indicates that to have a common experience shared across the company, companies

were looking at the uniform offerings, formats and locations to corner the customer loyalty and these were being aided from the four pillars of brand , technology, operations and overall organizational philosophy.

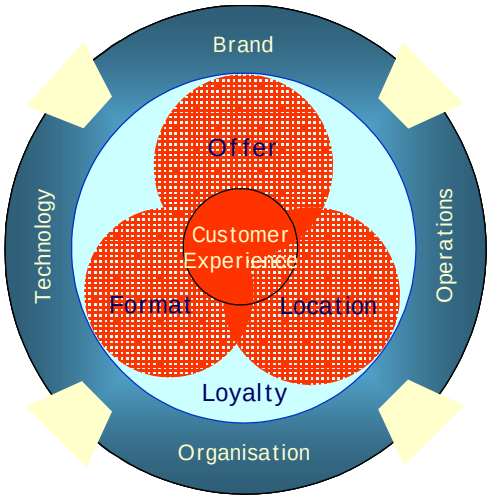


Fig 4.2: CRM Model in PSU's

4.3 CRM PURSUITS IN PRIVATE PETROLEUM INDUSTRY

The oil and gas sector is dominated by PSUs and a few large private sector companies. Figure 4.3 highlights the credentials of leading players in each segment (upstream, midstream and downstream) of the oil and gas industry.

Figure 4.3: Competitive landscape for Oil and Gas sector in India (top players)

In India, Oil and Natural Gas Corporation (ONGC) accounts for approximately 67per cent of the total oil and gas production, whereas the Indian Oil Corporation(IOC) and its subsidiary, the Chennai Petroleum Corporation Limited (CPCL),command the largest market share (approximately 48 per cent) in petroleum products. The country's refining segment is primarily dominated by domestic players

such as Hindustan petroleum Corporation Limited (HPCL), Bharat Petroleum Corporation Limited (BPCL), IOC and Reliance Industries.[72]

Reliance had taken up the hospitality side of petroleum retailing business, which in right earnest can be gauged from the fact that it has signed up a technical services agreement with US-based Flying J, a highway hospitality service provider to the transportation sector. The plan is to set up such outlets every100-300 km or after four-five hour drive to coincide with the inevitable 'break-journey'. The bases of pushing this model of value-added retailing was a bid to corner what it believed will be the next sector after railway and air travel to hit the growth trajectory – road travel. Given the increasing focus on road infrastructure in the country, the model was to enroll as many as customer with this value added service in the petroleum scenario. Petroleum retailing is a low margin business mostly runs on the concept of volume margins. The product throughput variation can only go up with the extra facilities that are offered such as food court and change room.

Quality of the service and hygiene in the hospitality segment was considered more important at these stations. Reliance has put a foot forward in this space by owning up responsibility for this service. The A1 Plazas served this segment well. Reliance has set up over 120 automobile service centers (R-Care) to go with the A1 Plazas to ensure

[72]Business Monitor International: India Oil and Gas Report, 2012

the creature comforts of the highway traveler by ensuring easy access to reliable repairs. The plans were also drawn to put 'Refresh' –, up-market eating joints inside select petrol retail premises, to cater the moneyed highway traveler. To demonstrate the customer oriented approach, reliance promoted and staged such example in the relationship marketing in the petroleum sector. Reliance expects about 150 retail outlets under the Qwik Mart brand name to come up at select fuel stations across India. Qwik Mart would be an integrated quick service, quick transaction store, which will offer the convenience of buying household food and non-food merchandise, music, take-aways and convenience-oriented ancillary services without a price penalty. The Qwik Mart value proposition offers convenience through multiple offerings under one roof, speed of service and value based pricing. They will be sub-branded as 'Commute' for those located within cities, 'Journey' for those on highways, and 'Neighborhood' for those in residential areas. A range of products like beverages, snacks and confectionery will be available in all the three formats. These initiatives demonstrate the churning happening in the petroleum sector and are key factors by companies in drawing plans for long-term relationships with the customers.

4.4 PETROLEUM RETAILING INDUSTRY: NEW CUSTOMER RELATIONSHIP MANAGENT PURSUITS

The petroleum retailing industry in Asia and Middle East facessignificant challenges. With low product differentiation, lack of customer loyalty, coupled with intense competition, due to deregulation, as in India, the various players will try to gain share from each other. This will exert downward pressure on margins and force players to adopt new and innovative strategies.

	Key Indicators Comaprison		
	India	UAE	Singapore
Land Area (sq kms)	3,287,590	83,600	692
Population (mm)	1,045	3.5	4.6
GDP ($ bn)	2,660	71	112
Per Capita GDP ($)	2,545	20,286	24,348
Roads (kms)	3,319,644	4,835	3,066
Registered Vehicles (mm)	60.00	0.61	0.70
Retail Fuel Sales Market:			
- mm ltrs	48,000	3,300	850
- $ mm	35,000	800	725
Avg price / ltr ($)	0.73	0.24	0.85
Retail Stations	19,000	630	222
Key Ratios:			
Fuel consumption/vehicle (ltrs/annum)	800	5,410	1,214
Fuel throughput/station (mm ltrs/annum)	2.5	5.2	3.8

(All values in US dollars)

India has deregulated the pricing mechanism for retail petroleum, enabling new players to enter the market, which was once a fiefdom of the public sector. The entry of new players like Reliance will grow the number of stations from existing 19,000 to over 23,000-25,000 in next 4-5 years. This will reduce the average throughput per station, and total fuel volumes per player. With market determined pricing

mechanism, prices will have to be lowered, thus reducing margins from fuel products.

In UAE prices are still regulated by the government. However, the current 3 players Adnoc Distribution, EPPCO,Emarat, tend to lose money on retail petrol, due to higher international crude prices. Also, by 2005 when GATT comes into force, the UAE market is likely to open up to further competition.

In Singapore, the 4 leading players Exxon Mobil, Shell, Caltexand BP account for over 95% of the retail fuel sales. Singapore is challenged with limited geography for addition of new stations. With limited growth in number of vehicles, the retail fuel volumes will remain stagnant, offering little scope for improving revenues and margins.

Petroleum Retailing Product or Service? - In growth markets, the major imperative should be to increase profitable revenues and market share growth. The petroleum retailers will need to develop differentiated value propositions, to improve revenues and their bottom lines; by adopting a customer focused approach and build strong brand equity. To drive revenues and margins, the retailers will have to attract new customers or increase share of their existing customers' wallet. The latter can be achieved by offering non-fuel products and services. Non-fuel products, which offer higher margins compared to petroleum products, enable companies to sustain

themselves, especially during times when oil prices are high. Though these products and services have been popular in the West, their importance is being recently felt in this region. Indian fuel retailers have started offering grocery, foods, laundry facilities, fresh foods,etc. at the convenience stores. UAE retailers are upgradingand adding similar facilities, to attract customers, and makethem spend more time and money at their facilities. Petroleum retailing is a product and service, with differentiation possible in either or both areas.

Know your customer: In developing products and services, the key is to understand your customer. Segmentation is a powerful tool to help marketers identify the requirements of the customers.

For eg. Mobil segmented the US petroleum consumers into 5segments:

Segment	Characteristics	Spending Pattern
Road Warriers (20%)	-Higher Income, Middle Aged Men -High Mileage	-Pay by Credit Card -Use premium gasoline -Sandwiches/drinks from C Stores -Occasional Car Wash
True Blues (16%)	-Moderate-high income Men/Women -Brand loyal	-Pay cash -Use premium gasoline
Generation F3 (27%)	-Fuel, food & fast -Men/Women under 25	-Drive a lot -Snack heavily at convenience store
Homebodies (21%)	-Housewives shuttling children -No brand loyalty	-Prefer stations in town/on their route
Price Shoppers (20%)	-Tight budgets -No brand loyalty	- Rarely use premium

Mobil's customer segmentation in the US: Mobil identified the top 3 segments as being the most profitable and developed its products and services to cater to the target customers' requirements. An exercise to understand the customer segments can go a long way for local

petroleum retailers to identify the target segments and developing the appropriate strategy. Cedar has segmented the retail market in Dubai, as outlined below:

Retail customer segmentation in Dubai (Cedar Research)

Segment	Characteristics	Shopping Pattern
UAE Nationals (12%)	-Conservative approach -Premium brands -High purchase value	-Avg purchase $9,500 pa -Daily-Weekly shopping -Adult accompanied by children
Arab Expats (15%)	-Moderate Buyer -Select categories & brands	-Avg Purchase $3,000 pa -Daily-Weekly shopping -Women accompanied with children
Asians (70%)	-Extremely price conscious	-Avg purchase $1,700 pa -Weekly shopping; Alone/with family
Western Expats (3%)	-Premium products -Brands of choice	-Avg purchase $7,000 pa -Weekly shopping; Alone/with family

Understand the customer segments can go a long way for local petroleum retailers to identify the target segments and developing the appropriate strategy. Cedar has segmented the retail market in Dubai, as outlined below:

Product and Service Development: Once the choice of target segment is identified, products and services need to be tailored to their requirements. The target customer should drive the value proposition, for both fuel and non-fuel products and services.

Fuel Based Proposition: In the western markets, petroleum retailers sell multiple grade fuels based on the octane ratings, with different prices at different stations, where the customer can hunt for a bargain. In UAE, where unleaded fuel is the norm, 2 grades are available, Octane 95 and 98. However, the Octane 98 petrol accounts

for less than 5% of the over3.3 billion liters consumed. This could be attributed to the 25% premium over the Octane 95 product price, which is administered by the government. However, with the large high-end car population, an opportunity exists in the market to improve the perception of product superiority and improve the bottom line. In India too, with the introduction of stringent pollution norms, coupled with the growth in large cars, the superior product based opportunity is large. The first mover advantage needs to be captured and capitalized through a mix of customer education and marketing activities.

Site Security: With expected new competition, site security is the key. InUAE and India, with the expansion of roads network, the existing players book the key sites, to beat future competition. However, development of the sites is undertaken once the road becomes operational. The challenge is to use a scientific site selection model, to ensure that the site is profitable once it is operational.

Site Rationalization: Even though site security is required, it is critical for managements to monitor performance of their existing and new stations. Loss making stations need to be identified, and corrective actions taken to make them profitable. If turnaround is not possible, it is bestto close them and divert the resources for other sites or activities.

Site Up gradation: The regional players have realized that having an attractive station, with friendly staff, and offering a range of non-fuel products and services, is the key to get customers to drive into their station. Depending on the site space availability, the various players in India and UAE have started renovating their existing sites, to offer an international look and feel. The challenge is to priorities the sites that need to be upgraded first and which could start offering higher contribution due to the change.

Non-Fuel Based Proposition: To get a larger share of the customers' wallet, non-fuel products and services are necessary. Non-fuel revenues contribute significantly for the petroleum retailers US (39%), France (25%), Europe (15%). In the UAE, it averages 12%-15% for various players, and offers significant opportunity for development in the region, especially in India.

The non-fuel products and services can be broadly grouped into 3 categories:

> Convenience stores (C Stores)

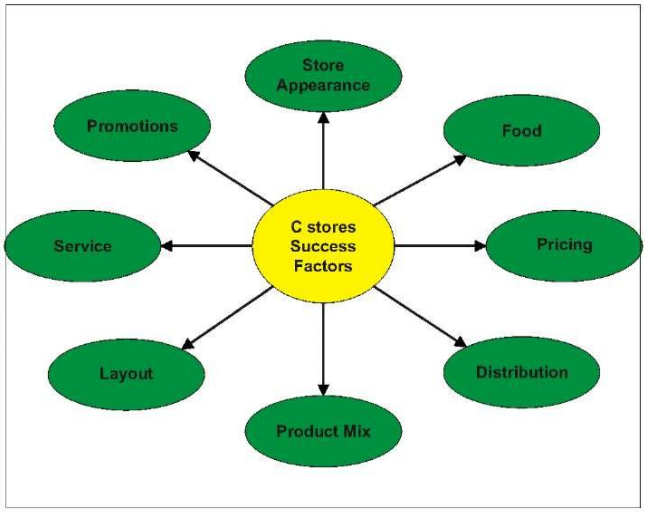
> Auto Care Services

> Ancillary Services

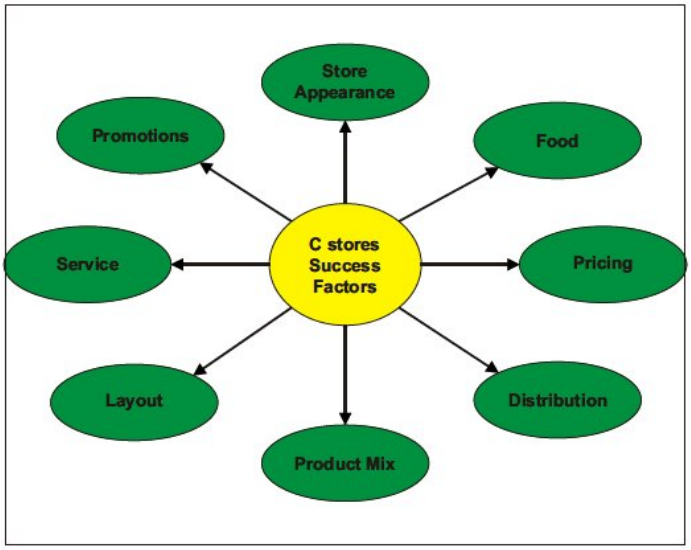
Convenience Stores: The concept of C stores though relatively new in India, has got established in the UAE for past 3-5 years. However the annual average revenue per sq ft in UAE is $325 compared to$550 in the US and $800 in UK. The average value per transaction in UAE is less than $3, compared to $6 in the UK.

Factors contributing to the success of C storesproposition: Product mix drives the C-stores shopping. In the UK,Tobacco (37%), confectionery & snacks (18%) and soft drinks(8%) are the leading categories. In the UAE, due to the wide availability of cigarettes in supermarkets, cigarette contribution is only 14%. It will be the same case in India, where there are cigarette kiosks at every nook and corner. The critical issue is to offer a product assortment that drives the target customer traffic. This could also be in terms of offering fresh groceries, fresh foods, coffee, hot snacks, etc.Also, special promotions in terms of discounts on high margin products can drive volumes (eg. Fountain soft drinks).

Store layout and appearance attract customers to spend more time in the store. This can be based on research to track the movement of customers, and hence the likelihood of them

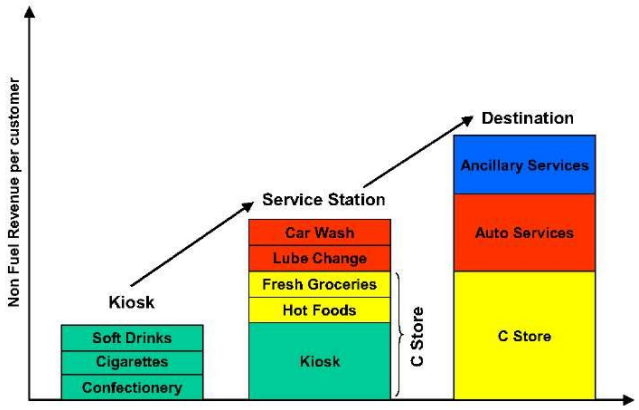


Picking the product. Since operating C-stores requiredifferent set of capabilities in terms of supply chain management and sourcing, the C-stores operations could beoutsourced. In UAE, all operators contract the fresh foods management to the food suppliers who replenish stocks on consumption and take back the unused stock based after expiry date. A reduced risk model is an alliance or complete outsourcing, especially in the branded hot foods category like pizzas, coffee, burgers, etc.



Auto Care Services: Auto care services complement the fuel services. These include lube change, car wash, wheel & tyre services, carupholstery cleaning, minor repair services, etc. All of these contribute to the incremental share of the customers' wallet. The car wash and auto care average around 7% and 4% of the total revenues for fuel retailers in Japan and US. In theUAE it is between l%-2%. Also, the lube to fuel volume ratio in UAE is 0.26%, compared to 1% internationally.However, in the UAE it is observed that where these services are available, their utilization is high, therefore, they should be available at more number of locations. In India these services offered at the stations are at a nascent stage, due to the customer's unwillingness to pay the price. Small garage operators tend to offer these services at a much lower price. The challenge is to understand the customers' willingness to pay, and design the service, coupled with right communication to promote them.

Ancillary Services: ATMs, laundry facilities, Internet access, mosques (in the Middle East), etc. get the customer to drive into the station, and increase his spending. Emarat (Shamil) and Eppco(Tasjeel) in UAE also offer car testing, registration, and auto insurance facilities, which are certified by the authorities. This provides the customer a one-stop-shop for the car's annualcheck-up, and other formalities, with the luxury of an air-conditioned facility, in less than 30 minutes compared to the half-day at government facilities. Door-to-door service is also offered, which requires even lesser time.



Other ancillary services could be potentially offered to include courier services, car rentals, etc, depending on the customers' requirements. The idea is to make the petrol station into a destination for the customer visit. Petroleum marketing has a strong non-fuel element, which can be leveraged for differentiation in a commodity market environment.

Customer Loyalty Programs: We have been discussing the subject of acquiring/retaining customers and understanding their requirements. Customer loyalty programs enable organizations worldwide to achieve these goals. The loyalty program ensures that the customer limits the use of competitors' facilities, due to various incentives, which are offered to him. Secondly, it can capture the buying behavior of the customer in terms of the types of products, purchase frequency, amount spent, locations used, etc. Companies can use this valuable data to differentiate and develop their product and service offerings, based on the customers' requirements, thereby improving revenues and profitability. Fuel Cards are being used in theUAE and recently in India, but primarily for fleetmanagement. Investment in technology is required, to link allthe forecourt and non-fuel facilities to a common data system. This investment can go a long way in understanding the customer.

CHAPTER -5

LITRATURE REVIEW

5.1 STRATEGIES OF CRM

CRM is a for the most part perceived, widely-executed technique for overseeing and development an organization's communications with customers. It is a procedure designed to gather data connected with customers to improve the relationship between an association and its customers. This is could be attained through creating procedure customer procurement, customer maintenance, and customer development. Moreover, CRM has been characterized as the methodology and the framework for making customer loyalty (Azani, C., & Khorramshahgol, R., 2005). Moreover, CRM has been considered as a complete method and methodology of securing, holding, and joining forces with particular customers to make prevalent worth for the organization and the customer (Parvatiyarl, A., & Sheth, N. J., 2001). The CRM is seen as a procedure by which an organization extends the customer data to enhance loyalty and hold customers. Therefore, the goal of the CRM is to discover, get, and hold customers (Choy, K. L., Lee, W. B., & Lo, V. , 2003).

For the thought of this study, we can expect that customer relationship management is recognized as the center competency and

a major playing point of a specific endeavor. Also, we are endeavoring to present information management ideas, systems, and tools into the association to turbo charger their customer relationship management competency, and in addition supercharging the auxiliary or supporting methodologies or skills so as to considerably enhance corporate aggressiveness.

There are two real territories to consider regarding reinforcing the customer relationship management abilities i.e. customer relationship management capacity or competency overhaul, and supporting methodology competency development. The three stages in which CRM can help to backing the relationship between a business and its customers are, to:

Procure: a CRM can help a business in securing new customers through phenomenal contact management, direct marketing, selling and satisfaction. Improve: a web-empowered CRM joined with customer administration tools offers customers phenomenal administration from a group of prepared and gifted sales and administration pros, which offers customers the comfort of one-quit shopping. (James A. O'brien & George M. Marakas, 2009) Retain: CRM software and databases empower a business to distinguish and reward its reliable customers and further create its focused on marketing and relationship marketing activities.

The essentials of customer relationship management developed from interest on after-sales customer administration. Moreover, it is focused around sales transactions and escalated data transforming. With further impact of marketing and customer introduction standards, customer relationship management advances to reception of quality included critical thinking and modified services. Then again, a definitive customer relationship management rule is to construct customer loyalty and lifetime patronization.

The expression customer relationship management (CRM) has only been in use since the early 1990s. Since then there have been many attempts to define the domain of CRM. As a relatively immature business or organizational practice, a consensus has not yet emerged about what counts as CRM. Even the meaning of the three-letter acronym CRM is contested. For example, although most people would understand that CRM means customer relationship management, others have used the acronym to mean customer relationship marketing.

The concept of Customer Relationship Management has its roots in relationship marketing. The following figure presents the triangle showing differences between those terms.

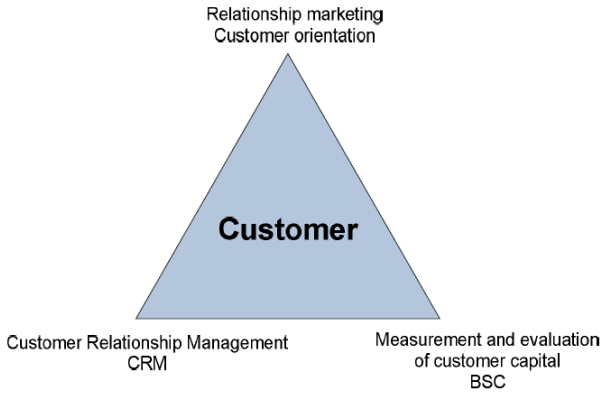


Figure 5.1Customer Relationship Management

Relationship marketing brought new approach to relations with customers, creating at the same time new market assumptions. CRM is a business strategy focused on maximizing shareholder value through winning, growing, and keeping the right customers. We can distinguish here two important elements. First of all, concentrating on the most important from company's perspective customers and second of all retaining long-term relationship with them.

That is why it is essential to collect consequently customers' opinions, complaints and new needs. In this way it is possible to approach a client more individually, and make them feel important for the company, because each company is worth as much as customer values it. Satisfied client will also recommend company's products to their friends. Therefore the main challenges are:

- Building long - term partner relations with customers,

- Identifying and focusing on the most significant customers,
- Acquiring and retaining new customers,

In developing CRM strategies whole organizations should be engaged. It includes adequate approach in terms of sales, marketing and customer support. A truly comprehensive picture of customer might include information collected by sales partners, suppliers or collaborative service deliverers. When company limits whole its attention only to operational activities, it can decrease communication between business and customer. Initial CRM implementations should be based on adequate information and perspective about customers and the firm's demand environment. Once implemented, CRM should allow organizations to see beyond the boundaries of the internal enterprise, and collect, analyze, and leverage such insight. It should include following issues:

- Understanding markets and customers (gathering market information, selecting target markets),
- Ability of dealing with different customers in different ways,
- Focusing on one-to-one relations by satisfying needs of individual customers,
- Developing an offer (selecting products, positioning, differentiating),
- Providing customer care (delivery process, service process, support, loyalty programs).

According to M. Stanusha, the main purpose of the concept from this perspective should be achieving such state, when high – profitable customers, each time they have a specific need, theywould see only one company, that could satisfy it. It is big challenge, however possible thanks to good communication with customer. CRM systems enable any representative of a company to remember who they are talking to, no matter what the transaction might be. It is essential to getto know all the processes used by potential customer to create value. JOtto said that company which wants to follow rules of CRM concept should use all the means in order to precisely get to know these processes. It should also concentrate on retaining mutual trust between company and customer. The product itself is important, but it is not enough just to produce it, advertise and find recipients. In order that customers keep it in conscience, it is important also to take care of such things as additional service, such as transport, insurance and guarantee. Such activities help to consolidate this relationship and attach customer to the company. CRM enables to differentiate products by adding new dimension, where even mass-produced products can differ with type of relationship which company has with its customers. So there is no point on concentrating on maximization of single transaction, but company should focus on creating strong and long – term relationship with customer. The shift to customer-centricity has implications for the entire organization, requiring changes in company's business culture, processes, and supporting

systems. However to get full benefits, it is necessary to create interactions which are based on trust between both parties and aim to mutual improvement of this relationship.

Summing up, CRM as a strategy focuses on building and consolidating a loyal group of regular customers, through constant satisfying of their needs and even going beyond these needs and individual preferences. In order to achieve this goal it is necessary to build strong relationships with those customers based on mutual trust.[73]

The idea of CRM is that it helps businesses use technology, human resources to gain insight into the behavior of customers and the value of those customers to provide better customer service, simplify marketing, and sales processes, cross sell products more effectively, help sales staff close deals faster, discover new customers and increase customer revenues. CRM is about creating a competitive advantage by being the best at understanding, communicating, and delivering and developing existing customer relationships in addition to creating and keeping new customers.

5.2 CONCEPTUAL PRINCIPLES OF RELATIONSHIP MARKETING

At a time of intense competition and increasingly demanding consumers, relationship marketing has attracted the attention of both

[73]Dougan S., Customer Relationship Management Strategies In Financial Services, London, Business Insights Ltd., 2004

researchers and managers. Academics have focused their attention on its scope, and developed a conceptual framework aimed at understanding the nature and value of the relationships not only with customers but also with a number of other stakeholders. Many researchers with varied interests in the field of marketing – such as distribution channels, services marketing, business-to-business marketing and marketing communication – have studied and explored the conceptual fundamentals of relationship marketing and its application in the business world (Palmer, Lind green and Vanhamme, 2005). In1994 Grönroos stated that relationship marketing would probably turn into one of the dominant paradigmsin marketing theory.

What are the origins of this approach? It is generally accepted that the roots of the expression “relationship marketing” can be found in the early 1980s. Two years later, in the context of a project related to industrial marketing, Barbara Jacksonuses the same expression of “relationship marketing “in her book *Winning and Keeping Industrial Customers* as well as in an article published in *Harvard Business Review* in 1985. This fact bears mentioning: the two researchers who introduced the expression– one in the area of services and the other in the industrial field – indicate, to some extent, its conceptual pillars. Finally, we must also mention the great Theodore Levitt, who in 1983, without using the term “relationship marketing” in those exact words, states that the objective of a business should not be limited to sales in itself but should also provide the greatest customer satisfaction,

which depends on “how well the relationship is managed by the seller”.

In 25 years, relationship marketing has undergone a significant evolution, with its current status undeniable. A recent Google search showed close to 8 000 000hits for the search term “*relationship marketing*”. On the other hand, the American Marketing Association changed its definition of marketing in 2004, putting in evidence its relational nature: “marketing is an organizational function and a set of processes for creating, communicating, and delivering value to customers and for managing customer relationships in ways that benefit the organization and its stakeholders.” It’s interesting to compare this definition with the one adopted before: “marketing is the process of planning and executing the conception, pricing, promotion, and distribution of goods, ideas, and services to create exchanges that satisfy individual and organizational goals.” It should be noted that the *Journal of Public Policy & Marketing* published a special issue at the end of 2007 dedicated to the theme of “The American Marketing Association’s New Definition of Marketing: Perspectives on Its Implications for Scholarship and the Role and Responsibility of Marketing in Society”, which reveals how the definition of marketing has changed its focus.[74]

[74]Berry, L. (1983). “Relationship Marketing”, in Berry, L. Shostack, G. and Upah, G. (editors), Emerging Perspectives
in Services Marketing, American Marketing Association, Chicago, IL.

Relationship marketing is based on the generation of a foundation of shared interest, in which companies and customers are committed to each other. Companies strive to use interactions with customers to generate commitment, a lasting desire in customers to maintain a valued relationship, and trust, a readiness to rely on the exchange partner. Trust is considered especially critical for relational exchanges because it is a crucial determinant of commitment. An important antecedent of trust is communication (Morgan and Hunt 1994). Communication in the CRM context involves the sharing of information between a firm and its customers (De Wulf, Odeken-Schröder, and Iacobucci 2001). To establish and maintain relationships, it is also imperative that organizations use the information to shape appropriate responses to customer needs. In effect, information plays a key role in building and maintaining customer relationships.

Consequently, CRM subsumes a collection of activities, for example, sub-processes related to the evaluation and prioritization of current and prospective customers, and market relating tactics that are not under the purview of relationship marketing. Therefore, although relationship marketing and CRM are both concerned with relationship development and maintenance activities, crucial differences regarding the intended process outputs (i.e., close, collaborative exchange relationships vs. profit maximizing and performance of customer

relationships) and the (necessarily) broader nature of CRM indicate that the two are related but have distinct phenomenon.[75]

5.3 CUSTOMER KNOWLEDGE MANAGEMENT - INCREASING EFFICIENCY OF CRM WITH KM

Customer relationship management (CRM) and knowledge management (KM) initiatives are directed towards the same goal: the delivery of continuous improvement towards customers. Initiatives stemming from this effort have been labeled 'customer knowledge management' (CKM) or 'knowledge-enabled CRM' (Geib andRiempp, 2002)[76]. In this contribution, we conceptualize CKM as the utilization of knowledge *for, from* and *about* customers in order to enhance the customer-relating capability of organizations. Recent research shows that an organization's KM capabilities are the most significant critical success factor affecting CRM impact. However, due to a history of poor solutions coupled with technology failures, many companies have a hard time justifying CKM initiatives in today's business world.

Nevertheless, the idea of combining KM initiatives with CRM activities is still alive as it has also proven to bring about considerable benefits when done correctly (Gibbert et al., 2002)[77].The CRM discipline's

[75]Christopher, M., Payne, A. and Ballantyne, D. (2002).Relationship Marketing: Creating Stakeholder Value, Butterwort-Heinemann, Oxford.

[76]Geib, M. and Riempp, G. (2002) Customer Knowledge Management, In: Geschäftsprozessorientiertes Wissensmanagement - Effektive Wissensnutzung bei der Planung und Umsetzung von Geschäftsprozessen (Eds., Abecker, A., Hinkelmann, K., Maus, H. and Müller, H. J.), Springer, Berlin et al., pp. 393-417.

[77]Gibbert, M., Leibold, M. and Probst, G. (2002) Five Styles of Customer Knowledge Management, and How Smart Companies Use Them To Create Value, European Management Journal, 20, 5, 459 - 469.

relationship with KM approaches and technologies has widely been recognized as a relevant field of research.

As CRM processes can be considered semi-structured or even unstructured, they reveal a high complexity as well as strong knowledge intensity. Since collecting, storing and distributing relevant knowledge for those CRM processes makes the deployment of KM techniques necessary, it is evident that an organization's KM capabilities play a key role in CRM success. In this context, KM can be defined as "the process of critically managing knowledge to meet existing needs, to identify and exploit existing and acquired knowledge assets and to develop new opportunities." Likewise, CKM can be defined as the systematic handling and management of knowledge collected at customer interaction points which are required for the efficient and effective support of business processes.

As a further concretization of this notion, we distinguish three kinds of knowledge flows that play a vital role in the interaction between an organization and its customers: knowledge *for*, *from* and *about* customers. Firstly, in order to support customers in their buying cycle, a continuous knowledge flow directed from the company to its customers (i.e. knowledge *for* customers) is a prerequisite. Knowledge for customers comprises information about products, markets and suppliers and is primarily addressed by CRM service processes. This knowledge dimension also impacts the customer's perception of the

service quality - which has been identified as an important determinant of satisfactory financial performance (Wang and Lo, 2004)[78].

At the same time, knowledge *from* customers has to be incorporated by the company for product and service innovation, idea generation as well as for the continuous improvement of its products and services. Capturing customer knowledge and involving customers in the innovation process can be achieved in various ways (Gibbert et al., 2002). For example, customers' knowledge about products, suppliers and market trends can be used via appropriate feedback mechanisms to enable a systematic improvement and innovation of products (Gibbert et al., 2002).

The collection and analysis of knowledge *about* customers is certainly one of the oldest forms of KM activity in the CRMdomain. Besides the customer's master data and past transactions, knowledge about the customer encompasses the customer's present needs and requirements, future desires, connections, purchasing activity and financial capability. Knowledge about customers is collected in CRMservice and support processes and analyzed in CRM analysis processes.

[78]Wang, Y. and Lo, H.-P. (2004) Customer-focused Performance and its Key Resource-based Determinants: An Integrated Framework, Cr, 14, 1&2.

Up to now, there has been an abundance of publications to KM, which fall into two broad categories, epistemological and ontology oriented KM models. Within epistemology mainly the cognitivistic and the autopoietic approaches have been of significance to the area of KM. The cognitivistic approach describes knowledge as stored in distinct knowledge structures which are created through rule based manipulation and can exists independently of an individual. In contrast, the autopoietic approach according to states that knowledge is context sensitive and embodied in the individual. [79]

According to the autopoietic epistemology, individuals acquire knowledge by observing and interpreting their environment. They can actively transfer knowledge between themselves through articulation and different types of interaction. The main differentiating characteristic of knowledge is the difficulty of its articulation. Knowledge that can be easily articulated is labeled “explicit knowledge”. Knowledge, that is difficult to articulate and therefore difficult to transfer is labeled “tacit knowledge” which was superseded by the term “implicit knowledge”. With their SECI KM model Nonaka and Takeuchi have formulated an encompassing epistemological autopoietic KM model.[80]

[79]von Krogh, G., Roos, J. and Slocum, K., "An Essay on Corporate Epistemology", Strategic Management Journal, Vol. 15, No. Special Issue: Strategy: Search for New Para-digms, Summer, 1994, 1994, pp. 53-71.

[80]von Foerster, H., "Principles of self-organization in socio-managerial context", in: Ulrich, H. and Probst, G. J. B. (Eds.), Self-organization and Management of Social Systems, Springer-Verlag, Berlin, 1984, pp. 2-24.

Ontological KM models on the other hand view knowledge as a “black box”. The characteristics of knowledge are defined through its relationships with a constructed universe of discourse. Modeling dimensions frequently used by ontological KM models in-clude a process dimension and an agent dimension.

Process oriented KM models focus on the characteristics of knowledge during its lifecycle. They analyze the relationships and environmental variables that influence the processes of knowledge development, dissemination, modification and use. Examples for process oriented KM models. Agent oriented KM models focus on the characteristics of knowledge during the flow between individuals. They analyze the variables that expedite or hinder the flow of knowledge in social networks. Examples for agent oriented KM models.

Most KM models developed within the last decade include characteristics of both views. Nonaka has integrated an agent ontology dimension in 1994 and he tries to fully bond both views in his concept of “BA” . [81]

Marketing, sales, and service are primary business functions [26] with the characteristics of a high degree of direct customer interaction and knowledge intensity. We derive our process model by detailing these functions into relevant business processes, which may be cross-

[81]Wenger, E., Communities of Practice: Learning, Mean-ing, and Identity, Cambridge University Press, Cambridge, 1997.

functional. A CRM business process involves the processing of customer knowledge to pursue the goals of relationship marketing. Usually it also involves direct customer contact and the exchange of information or services between enterprise and customer. Such processes are either triggered by the customer with the aim of receiving information or services or by the enterprise with the aim of delivering information or services to customers. Each process handles a specific business object which distinguishes it from other processes. Based on [31, pp. 57 et seqq.] and our own action research experience we identified campaign management, lead management, offer management, con-tract management, complaint management, and service management as the six relevant CRM business processes (cf. figure 5.2).

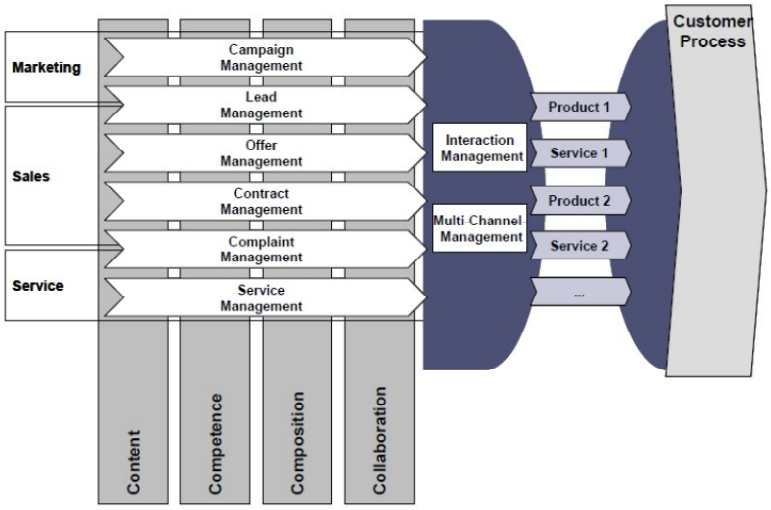


Figure 5.2: Customer Knowledge Management process model

The contribution of this study lies in illustrating the successful application of the CKM process model in different companies in an operational setting. In each case critical customer processes were identified, KM instruments suitable for those processes selected according to the CKM process model and then implemented. This resulted in significant performance improvements in those processes eventually enabling higher revenues and/or lower costs.

Case one identified content creation and knowledge navigation as crucial elements within the CCC and service management. The CKM process model suggests content management systems with an easily maintainable content structure and search functionality as appropriate KM instruments for these elements.

With the implemented system the duration of ser-vice calls and the quality of the provided service could be improved, enhancing knowledge transfer to the customer, resulting in higher customer satisfaction, higher loyalty and thus, higher revenue. Also, more efficient content creation was facilitated, resulting in lower costs.

5.4CUSTOMER RELATIONSHIP MANAGEMENT AND LOYALTY

Customer loyalty is defined with consideration paid to the amount of buying for a given trademark. The level of loyalty is measured by the watching of the frequency of buying. With the increase in the amount of accessible information in recent years, the conscious level of

customers has improved continually. Today's customers are aware of the power they have on the market and that every activity is realized for them. It is now easier to reach the products and services. Before choosing a given trademark, consumers look at the price, newness, accessibility of the product and the additional services offered. As the alternatives increased, consumers' loyalty to the products and services decreased. Today firms have entered into an effort to present at a lower cost than their rivals the products and services that can meet the customer wishes and expectations fully, so that they can render customers more loyal.

Whether enterprises can make their current customers loyal depends on whether they can manage the customer relationships well. As customers have grown to be more conscious consumers, enterprises have had to pay the prices of the errors and faults they do in customer relationships. The most important quality of the 1990s is that customers revealed their power then. They realized that they themselves had something to say and have themselves listened to. The firms, then, understood that they had to listen to their customers so as to be able to sustain their presence in the market. (Bozkurt, 2000: 25) After the 2000s, with the increased use and effect of the internet and such platforms as discussion groups, customers had the opportunity to be more powerful and effective against the enterprises. Thus, enterprises noticed that they could only be successful if they adopted customer-based marketing.

Customer loyalty is the major concern today for organizations and is a critical issue for sustainability in today's competitive market place. One of the challenges faced today by the companies other than increasing the sales of products, reduction of marketing cost and other marketing variables, is to minimize customer defection. This is because loyal customers' tend to produce greater cash flow and profits; and they are less sensitive to price increases, they generate positive word of mouth messages and they do not have an acquisition cost (Reichheld, 2000;)[82]. One of the primary goals of CRM is customer retention or customer loyalty (Verhoef, 2003)[83].

The concept of customer loyalty often builds up long-term customer relationships. The advantage of building such loyal relationship is to increase companies' profitability as loyalty brings about low transaction costs, reduced price sensitivity and increase recommendations thru WOM. The two main strategies to achieve customer loyalty are to enroll the customer into long-term relationships and ensuring sustained customer satisfaction. Customer satisfaction is characterized by trust and being treated well in the future and it is customer's overall evaluation of the performance of an offering to date. This overall satisfaction has a strong positive effect on customer loyalty intentions across a wide range of product and service categories. Satisfaction typically mediates the effects of product

[82]Reichheld, Frederick and Thomas Teal (2000), The Loyalty Effect . Boston: Harvard Business School Press.
[83]Verhoef, Peter C. (2003), "Understanding the Effect of Customer Relationship Management Efforts on Customer Retention and Customer Share Development," Journal of Marketing, 67 (October), 30-45.

quality, service quality, and price or payment equity on loyalty. It also contains a significant affective component, which is created through repeated product or service usage (Oliver, 1999)[84]. In a service context, overall satisfaction is similar to overall evaluations of service quality. Compared with more episodic or transaction-specific measures of performance, overall evaluations are more likely to influence the customer behaviors that help a firm, such as positive word of mouth and repurchase (Boulding et al., 1993).

5.5 IT AND CRM

Information technology (IT) companies have tended to use the termCRM to describe the software applications that automate the marketing, selling and service functions of businesses. This equates CRM with technology. Although the market for CRM software is now populated with many players, it started in 1993 when Tom Siebel founded Siebel Systems Inc. Use of the term CRM can be traced back to that period.

Forrester, the technology research organization, estimates that worldwide spending on CRM technologies will reach US$11 billion per annum by2010. Others with a managerial rather than technological emphasis claim that CRM is a disciplined approach to developing and maintaining profitable customer relationships, and that technology may or may not have a role.

[84]Oliver, Richard L. (1999), "Whence Consumer Loyalty?" Journal of Marketing, 63 (Special Issue), 33-44.

Many CRM implementations are seen as IT initiatives, rather than broader strategic initiatives. True, most CRM implementations require the deployment of IT solutions. However, this should not be misunderstood. To say that CRM is about IT is like saying that gardening is about the spade or that art is about the paintbrush. IT is an enabler, a facilitator. Improvements come about in the way customers are managed through a combination of improved processes, the right competencies and attitudes (people), the right strategies and the right enabling technologies.

The importance of people and processes should not be underestimated. People develop and implement the processes that are enabled by IT. IT cannot compensate for bad processes and unskilled people. SuccessfulCRM implementations involve people designing and implementing processes that deliver customer and company value. Often, these processes are IT-enabled. IT is therefore a part of most CRM strategies. That said, not all CRM initiatives involve IT investments. An overarching goal of many CRM projects is the development of relationships with, and retention of, highly valued customers. This may involve behavioral changes in store employees, education of call centre staff, and a focus on empathy and reliability from salespeople. IT may play no role at all.[85]

[85]Gamble, P., Stone, M. and Woodcock, N. (1999) Customer relationship marketing: up close and personal.London: Kogan Page; Jain, S.C. (2005). CRM shifts the paradigm. Journal of Strategic Marketing , Vol. 13, December, pp. 275–291; Evans, M., O'Malley, L. and Patterson, M. (2004) Exploing direct and customer relationship marketing . London: Thomson.

Customer relationship management has been so pervasive that it has evolved both as a business philosophy and as a technology. View CRM as one of three core macro level business processes and define it as "all aspects of identifying customers, creating customer knowledge, building customer relationships, and shaping their perspectives of the organization and its products." Others use the term CRM to refer to "the use of technology to manage customer interactions and transactions", which explicitly recognizes technology's importance to CRM processes. However, technologies alone often cannot perform the CRM business process that Srivastava, Shervani, and Fahey describe; yet people often use technological tools to implement the CRM business process.

Customer relationship management (CRM) can be thought of as IT-enabled relationship marketing. It has numerous definitions and perspectives, and success of implementation has been limited to date. Literature on the subject gives importance of a balance between strategy formulation, IT and organizational alignment when adopting and implementing CRM in a business environment. Customer relationship management (CRM) has emerged in recent years as the convergence of a number of factors. coined the term 'relationship marketing', which encouraged a new movement towards customer relationships rather than customer transactions promoted the concept of one-to-one marketing and of mass customization, and (Reichheld, 1996) further motivated companies with his research on

loyalty and empirical evidence of the profitability of customer retention. Customer lifetime value (CLV) has become a key element of CRM.

5.6 SATISFACTION AND PROFITABILITY

There are two principal interpretations of satisfaction within the literature of satisfaction as a process and satisfaction as an outcome. Early concepts of satisfaction research have typically defined satisfaction as a post choice evaluative judgment concerning a specific purchase decision.

The most widely accepted model, in which satisfaction is a function of discontinuation, which in turn is a function of both expectations and performance. The discontinuation paradigm in process theory provides the grounding for the vast majority of satisfaction studies and encompasses four constructs ± expectations, performance, discontinuation and satisfaction. This model suggests that the effects of expectations are primarily through discontinuation, but they also have an effect through perceived performance, as many studies have found a direct effect of perceived performance on satisfaction. Swan and Combs (1976) were among the first to argue that satisfaction is associated with performance that fulfils expectations, while dissatisfaction occurs when performance falls below expectations. In addition. Poiszand Von Grumbkow (1988) view

satisfaction as a discrepancy between the observed and the desired. This is consistent with value-percept disparity theory which was developed in response to the problem that consumers could be satisfied by aspects for which expectations never existed. The value-percept theory views satisfaction as an emotional response triggered by cognitive-evaluative process. In other words, it is the comparison of the "object" to one's values rather than an expectation.

Customers want a meeting between their values (needs and wants) and the object of their evaluations. More recently, renewed attention has been focused on the nature of satisfaction = emotion, fulfillment and state. Consequently, recent literature adds to this perspective in two ways. First, although traditional models implicitly assume that customer satisfaction is essentially the result of cognitive processes, new conceptual developments suggest that affective processes may also contribute substantially to the explanation and prediction of consumer satisfaction. Second, satisfaction should be viewed as a judgment based on the cumulative experience made with a certain product or service rather than a transaction-specific phenomenon (Wilton and Nicosia. 1986).

Customer satisfaction is defined as a customer's overall evaluation of the performance of an offering to date. This overall satisfaction has a

strong positive effect 011 customer loyalty intentions across a wide range of product and service categories (Gustafsson, 2005).[86]

The satisfaction judgment is related to all the experiences made with a certain business concerning its given products, the sales process, and the after- sale service.

Whether the customer is satisfied after purchase also depends on the offer's performance in relation to the customer's expectation. Customers form their expectation from past buying experience, friends' and associates' advice, and marketers' and competitors' information and promises (Kotler. 2003).[87]

(Yeung and Ennew, 2001)[88], found that satisfaction does not always lead to loyalty. Anderson, Fornell and Lehmann (1994) found that customer satisfaction had a strong effect on profitability as measured by the company's return on investment. Further, they found that there was a strong immediate effect and a weaker carryover effect of customer satisfaction on a company's profitability, which implied that customer satisfaction in one period influenced profitability in that period and also in the next period. The rationale provided by Anderson, Fornell and Rust (1997) could explain the mixed evidence for a positive relationship between customer satisfaction and financial

[86]Gustafsson Anders, Johnson Michael D..& Roos Inger. 2005, 'The Effects of Customer Satisfaction, Relationship Commitment
[87]Kotler Philip. 2003. Marketing Management. Pearson Education.Inc. Fifth edition.
[88]Yeung, M.C.H. and Ennew, C.T. (2001) Measuring the impact of customer satisfaction on profitability: a sectoral analysis.Journal of Targeting, Measurement and Analysis for Marketing 10(2), 106–16.

performance measures found by Yeung and Ennew (2001). Similarly, Standard and Poor's Compustat, found that the relationship between satisfaction and profitability varied from industry to industry, with positive relationships in some industries and no relationships in others. As the difference between customer desires and the company's offerings increase, the level of satisfaction with the company's offerings will decrease. Research (Anderson, Fornell and Lehmann, 1994; Griffin and Hauser, 1993; Fornell and Wernerfelt, 1987, 1988) has found that satisfaction and market share are negatively related simply because a given company's limited resources cannot maintain the same level of satisfaction achieved in a niche market when the firm makes inroads into other larger markets.

Customer satisfaction has significant implications for the economic performance of companies (Bolton, Lemon, and Verhoef, 2002)[89]. Customer satisfaction has been found to have a negative impact on customer complaints and a positive impact on customer loyalty and usage behavior. Increased customer loyalty may increase usage levels, secure future revenues, and minimize the likelihood of customer defection. Customer satisfaction may also reduce costs related to warranties, complaints, defective goods, and field service costs.

[89]Bolton, R.N., Lemo, K.N. and Verhoef, P.C. (2002), "The theoretical underpinnings of customer asset management: a framework and propositions for future research", ERIM Report Series Research in Management, ERS-2002-80- MKT, ERIM, Rotterdam.

CHAPTER - 6

RESEARCH METHODOLOGY

Research methodology has been defined as a framework that outlines the methods and procedures to be followed when collecting and analyzing the required information from respondents. After the formulation of the research problem, the research design must be developed. A research design is a master plan specifying the methods and procedures for collecting and analyzing information (Zikmund, 2003:65)

The base of this study was formed by a literature review of the variables of Customer Relationship Management and Customer Loyalty. Empirical research was undertaken to investigate the relationship between the different variables. A distinction can be made between two research criterion, namely qualitative and quantitative research.

The purpose of quantitative research is to determine the quantity or extent of some phenomenon in the form of numbers (Zikmund, 2003:111).[90]

[90] Zikmund, W.G. (2003). Business research methods.7th edition. Mason: Thomson South-Western.

This study was conducted in two phases, in the first phase focus was on qualitative research, and in the second phase focus was on quantitative research.

The focus group interview assisted the researcher in developing the questionnaire and provided the desired information on CRM and customer loyalty from Liberty Life's viewpoint (Rootman, 2006:22).[91] The questionnaire was used during the quantitative phase of the research. The second phase of the study was based on quantitative research. The reason for quantitative data is that it is easy to interpret the results in simple conclusions.

The petroleum sector has been de-regularized by the Government; yet, the sector works under some policy system of the Government of India. The petroleum sector in the last 3-4 years has been presented to rivalry and off late the customers have encountered a lot of people new streets to bait them and change their buying propensities. New players have entered into the field of petroleum marketing and have mixed the opposition. This has opened up numerous sectors inside the petro-retailing and numerous streets towards the customer profits have been arranged. The study looks for the business execution and market pointers in the light of the aggressive elements and how the business execution has been upgraded.

[91] Rootman, C. (2006). The influence of customer relationship management on the service quality of banks. Unpublished master"s dissertation. Port Elizabeth: Nelson Mandela Metropolitan University.

The skeleton has been planned at levels where endeavors of organization, products, brands, and its impacts on individual customer were seen. The structure is focused around the prior work done by Reinartz, Krafft, Wayne(2004),[92]which highlighted the CRM procedure, its measurement and effect on execution. The model has been fittingly examined in the writing review. The CRM deliberations of public sector oil organizations were focused around the start that to enhance business execution, customer is at the inside of consideration for all activities. To focus on it, joining the customer with the fitting investigation of the writing and after that formalizing the suitable questions, which have been replied in the research work. The point was to create the extension, which will then be utilized to serve meeting the research destination and sub targets. The following period of the study was an exact investigation of company and its customer. The research methodology was exact through data accumulation from the company's records; overview Research, through organized questionnaire and Interviews. The institutionalized and approved questionnaire was utilized for this. The data gathered was examined through officially created engineering. With a specific end goal to approve the research, the study was directed in Retail business arrangement of every organization.

[92]Reinartz, Werner, Manfred Krafft, and Wayne D. Hoyer (2004), "The Customer Relationship Management Process: Its Measurement and Impact on Performance," Journal of Marketing Research, 41 (August), 293–305.

In light of the preparatory study of the data, availability, technique for operation and based the variables as said above, it was inferred that the data might be gathered from the three significant oil organizations as the joined market share of these organizations is in excess of 95% and measurably they speak to the market introduction. The data gathering was hence limited to three organizations' i.e. IOC, BPC and HPC. IBP Company has since fused with IOC and accordingly has not been considered independently.

6.1 RESEARCH OBJECTIVE

The point of this study is to illuminate the examination system important to this study, which is the purpose for the achievement or disappointment of CRM activities in diverse organizations from the management viewpoint, with the aim to study organizations in diverse industries and distinctive nations.

CRM, as a rising control, is in extraordinary need of hypothetical help. Directing hypotheses and models are in short supply in the field, most likely because of the truth that it is another range for examination and due to its trade with IT and data systems, which have been quickly creating. The focal examination question for this study is: Why and how do CRM activities succeed then again fall flat? Inquire about around there will help building flourishing customer relationships what's more long haul corporate survival. Furthermore, discriminating

achievement elements for CRM activities are to be drawn from the exploration discoveries.

The aims and objectives will be researched in the Indian Petroleum Corporate Sector, which are Indian Oil, Bharat Petroleum and Hindustan Petroleum Corporation Limited, IBP Company Limited, MRPL, BRPL, AOD all Government of India Enterprise under the nomenclature of Public Sector Oil Companies. In order to arrive at an empirical outcome of the study, the data collected from the customers impacting the Customer relationships between the company and customers shall be analyzed, which was collected from the Sample data collected directly from the customers in the National Capital Region (NCR). Data has been taken from company's internal records, from Government of India records and also from sources, which from petroleum company point of view were authenticate and relevant. The basic aim of the research is to understand the significance of CRM for the chosen corporate and its relevance in current business strategic context. From the collected data, it was seen whether business performance could be enhanced using CRM practices in this organization. In order to empirically prove that the business performance is enhanced: the company's secondary data has been used.

6.2SUGGESTED RESEARCH MODEL

Research systems might be characterized in different ways, however a standout amongst the most widely recognized refinements is in the middle of qualitative and quantitative exploration strategies. The Wikipedia reference book characterizes quantitative research as "the precise scientific examination of quantitative properties and phenomena and their relationships". The target of quantitative examination is to apply numerical models to natural phenomena and utilization estimation that gives the central association between experimental perception furthermore numerical interpretation of quantitative relationships (Wikipedia online lexicon).

Then again, qualitative exploration strategies are designed to help specialists comprehend individuals and the social connections inside which they live. Kaplan and Maxwell (1994) contend that the objective of comprehension a wonder from the perspective of the members is to a great extent lost when text based data are measured. Since one of the major explanations behind doing qualitative exploration is to wind up more accomplished with the marvel under study and to research perplexing and touchy issues, in this manner the analyst chose to receive a qualitative technique to help in understanding and investigating CRM activities in their genuine setting.

The Conceptual model for this study is gotten from the hypotheses and proposes in the past research. The research system proposed in this study tries to inspect the CRM determinants and the business properties affected by CRM. Since the business properties are affected by CRM, they likewise sway the conclusion execution of the businesses. Moreover, a portion of the CRM determinants straightforwardly or in a roundabout way additionally affect the conclusion of the business execution.

It is estimated that the relationship between the CRM determinants and the business characteristics are then again genuine and they thusly impact one another. The net result of the two likewise impacts the business execution. The marketing writing generally discusses the business execution conclusion in connection to the Sales execution and also market share. The Market writing considers the sales execution of the assembling organizations and numerous different organizations. Be that as it may, the oil organizations, which service biggest number of customers, are, no doubt surveyed in this connection and exceptionally limited writing supports this study.

6.3 RESEARCH DESIGN

The examination design is experimental in nature since the study is led by utilizing both investigative and analytic kind of exploration. The study is directed in two stages form, with a preparatory pilot study

emulated by the fundamental study. The significant piece of the study is focused around essential data.

A research endeavor examination design was utilized to give an inside and out investigation of the marvel. A research endeavor examination design is a scientific technique for examination in which data is gathered and investigated with a specific end goal to depict the current conditions, terms or relationships concerning an issue of a given single element extension. The study embraced this approach on the variables influencing successful appropriation of petroleum items in India.

The research design has the premise in the quantitative model strategies, which was viewed as proper with the end goal of this study - to test and observationally accept a measure of customer relationship with the execution of the public sector oil organizations. One issue, which is confronted with such research study, is that of dependability, legitimacy and characteristic inclination, which can leak into the study because of the data interface being the customers. The present study has taken enough safeguards that such blunders and inconsistencies don't set into the system. The premise of this statement is the accessibility of the confirmation focused around the broad research methodology, which is obligatory for the improvement of legitimate analytic questionnaire and instruments, supplemented capably by the speculations referred to in the hypothesis and

literature. The study has the premise of exploratory research strategy, which can be tested with the assistance of a hypothesis. It is likewise enlightening as it gives depiction of the contemporary CRM practices, which are, no doubt followed. Likewise, the study is not illustrative, as it doesn't test the cool relationships.

The present research utilizes a cross-sectional study design. Cross-sectional design includes the accumulation of data from any given specimen of populace components just once (Kumar, 1995)[93]clarified that this design is suitable for studies that plan to investigate a wonder, circumstance, issue, demeanor or issue by considering a cross-area of the populace at one point in time. The preference of this method is that it is less expensive and less time expending than a longitudinal design. Actually, the greater part of surviving Customer Relationship Management and Business execution studies have utilized cross-sectional designs.

The Customer relationship management and its impact of Business performance in public sector oil companies has been the topic under discussion. Since the companies have various business lines:

- Supplying directly to the large customers, which the company does to its large industrial consumers buying quantities in bulk.

[93]Kumar. Nirmalya, Lisa K, Sheer, and Jan-Benedict E.M. Steenkamp (1995), "The Effects of Perceived Interdependence on Dealer Attitudes," Journal of Marketing Research, 32 (August), pp. 348-356.

- Supplying to large number of LPG customers which the company is necessarily doing thru its large dealer network.

- Supplying Petrol and diesel to the direct retails customer who are primarily using fuels for usage of self-consumption in their automobiles and vehicles.

To understand the CRM efforts of the company and how they have impacted the business performance, the entire exercise has been done with in the retail segment and therefore customer data has been collected with respect to the public sector oil companies.

6.4 DATA COLLECTION

Various techniques could be used to gather primary data for descriptive research. These includes personal interviews, self-administered surveys, postal surveys, telephonic surveys and observation.

Essential data on the elements influencing powerful dissemination in the petroleum industry will be gathered. Auxiliary data was gotten from important writing audit from papers, diaries, magazines and the web. Essential data was gathered utilizing semi organized polls. These surveys were built with both open and shut finished inquiries to empower for quantitative and qualitative examination individually.

The Data regarding the oil company outlets have been arranged focused around the data got from the Public sector oil organizations. The data as for the retail outlet sales are accessible in the public space. Organizations are not eager to share other Strategic data as a business system. While the data as for the name and their location has been simpler to spot, it is hard to know the shareholding example of such outlets. The motivation behind the pertinence of this data is to comprehend if the service quality gauges change relying on the shareholding of the company in the retail outlet operations. From the prelim any studies it was clear that the holding examples in the operation of the outlet has an exceptionally discriminating part in the measurement of our study as a percentage of the elements can have bigger change on the result of the study if the holding examples was not same.

The key question was to distinguish such basic parameters, which have an immediate linkage to the relationship exertions, offered by the company. Resulting to this, it was consequently considered to choose these two classifications independently from the data collection reason. The determination was consequently made for company claimed, company worked outlets and company possessed and dealer worked outlets. Hence, from the rundown of in excess of 1000 outlets, the determination was made for the Company claimed company worked outlets and dealer worked outlets, which would be speaking to the cross segment of the company operations along with comparable

parameters 'of operations. The avocation for picking for such a classification of outlet for Public Sector Oil Company is that the outlet should speak to the comparative set of values regardless of the location of the outlet and the offering made by the company towards the customer services does not change with location. It is consequently, that these classes of outlets have been chosen for this extent of the study.

Secondary Data - Data collection should be from the company's internal records. The data was collected from Company's internal records. The measure of the execution was the company's sales numbers and also Market share to measure business execution. Existing wellsprings of secondary data was tapped to supplement the primary data identified with this expansive organization and different organizations. In-house research directed by the organization was likewise audited and co-related in the study.

The holders of the organization were arrived at with the viewpoint of searching for agree to accumulate data additionally to elucidate the inspiration driving the study. At the point when this was done, the surveys were circled to the help staff. The pro in individual made individual make up for lost time to ensure that the entire surveys were assembled back. This was done in a joint exertion with a chief or line boss in control. This methodology was done while ensuring the part

ordered ness of the gave data. In this portion, the improvement of the survey is inspected.

The research instrument comprised of an overall characterized organized questionnaire, which requested the reactions from the respondents, with the assistance of the questioner. As referred to in the literature, that questionnaire survey is a productive device to evaluate the view of the individual customers on a specific subject. Pilot testing of the measurement instrument was important to approve the things and the entire scale. Despite the fact that a portion of the key segments of the questionnaire have risen focused around the archived 1itrature survey, yet the questionnaire was altogether new for the study.

6.5 DATA SAMPLING

With a specific end goal to pick sampling units towards exact study of the Customer Relationship management and its effect on business execution, a few situations and skeletons have been proposed in the literature.

The case might be the business execution of the company on the item retailing in the free market through petrol pumps (Retail outlets in company's records). Here additionally, the products supplied are 'me-as well' class and value differentiation is not the determination component. The customers visit these petrol pumps absolutely on the

bases of relationship, which the company's has constructed, or attempting to manufacture with them over a period. The opposition is complexed with the entrance of more private players, who are attempting to differentiate themselves focused around the customer services. In this environment, PSU oil organizations have embraced a few activities to manufacture long-term loyalty, building customer value, giving data, learning, and other value added services at their petrol pumps, which have a bigger effect on the long-term relationship with the customers. The data might be illustrative data for this situation, which should spread a sufficient number of customers of the company covering over the land zone of the nation.

The sampled data on the CRM exertions has been collected from an agent cross area of respondents who were approached without any bias or prequalification. The sampling must be stratified random sampling as the respondents may have different encounters in co-relating the volume and services relationships on an organized questionnaire to finish up the business execution.

A stratified random sampling method was utilized as a part of this study. Classes the systematic sampling method as a probability sampling system. They bring up that an example, in a systematic sampling method, is picked by selecting a random beginning stage and afterward picking each Kth component in progression from the sampling casing. It is pretty much like straightforward random

sampling, in that every component in the populace has a known and equivalent shot of being chosen. The main difference is that just reasonable specimens of size n can be drawn with a known and equivalent probability of choice, while the remaining example of size n has a zero probability of being chosen .

(Day, 2002)[94](Day, 2002)94 contend that the precision of systematic sampling can surpass that of basic random sampling when the requesting of the components is identified with the qualities of investment on the grounds that the specimen will be more illustrative of the populace. For this situation, the List of the customers as gave by the dealer and the company utilizing the records was arranged as a part of an in sequential order request for each one Retail outlet and afterward the examples were drawn. The point of this study is additionally to have tests drawn from every strata of the customer demography to speak to an uniform populace. Henceforth, the systematic sampling method is fitting.

6.6 HYPOTHESIS

The research theories were defined concerning the particular relationships in the theoretical structure. These relationships between the variables are the significant concerns of the study. The study is principally focused around the commence that the services by the oil

[94]Day, George S. and C. Van den Bulte (2002), "Superiority in Customer Relationship Management: Consequences for Competitive Advantage and Performance," working paper, Wharton School of Business, University of Pennsylvania.

organizations are the -free variable- and fulfillment of the customers at the retail outlet in different company is the ward variable.

Fulfillment of the customers is free variable, which is affected by the components influencing their relationship with the company. The execution of the company under study is the ward variable. In the study, to land at the uniform base of the execution of the oil organizations, sales and profit before premium and expenses, Sales Volume and Market Share. The dependendent variables as characterized in the study are autonomous of one another. The speculations as specified below are intelligent of this reason and are tested in point of interest in the ensuing chapters.

The researcher suggest that performance and productivity of service station is related to different potential variables: the owner/managers, the station, location and the competition-/competitors.

H1: A manager/owner becomes a dealer service station years of experience before are positively correlated with performance and labor productivity.

H2: Build-up area (size) in square feet of the service stations is positively correlated with service stations performance and labor productivity.

H3: There is a positive relationship between performance and labor productivity and inventory of non-fuel products in the service station.

H4: The number of islands is positively correlated with service stations performance and labor productivity.

H5: The traffic density where the service stations situated will be positively correlated with service stations performance and labour productivity.

H6: There is a positive relationship between service station location and performance and labour productivity.

6.7 THE QUESTIONNAIRE

One of the prerequisite to design a good questionnaire is deciding what is to be measured. There are basically various approaches to developing initial indicators in questionnaire design. These are -

1. Using observation or unstructured interview.

2. The Customer Profile.

3. The factor important in the Fuel buying process.

4. The demographic profile.

Questionnaire items for this research were initially developed based on measures developed in previous researches made by researchers. The final version of the questionnaire items however were modified to fit this particular context of research and thus they had gone through pilot testing and evaluation.

On the other hand, before the questionnaires were developed, a series of personal interviews were conducted with oil company executives and academicians. Three criteria were applied in developing the questionnaires, included: 1) test administration between 10 to 15minutes, (2) elimination of variables with apparent low predictive value, and (3) a questionnaire easily understood by the service station managers or owners.

The questions have been kept to the minimum as possible, so that the respondents will not find it difficult and boring to answer all of them.

To increase reliability, the questionnaire was carefully developed through two pretests and checked twice by the supervisor. One of the major concerns of the study was response rate. From discussion of availability, response rate was satisfacted. On the other hand, the questionnaire length was limited to increase the response rate and at the end the trade-off was made.

The Pilot Study - every questionnaire should be pretested. For this reason, the primary pretesting was done.Thepreliminary questionnaire designed for the pilot test were sent personally to the various service stations at surrounding area.

The interview was conducted by using the structured questionnaire. In the testing, they were asked to responds to what they thought about the questions and the questionnaires a whole. Any difficulties such as problems of understanding the questions, prognosis of possible reactions to the questions and other suggestions for improvement found during the test was taken seriously and used them to modify the questionnaire.

CHAPTER – 7

RESEARCH ANALYSIS

7.1 INTRODUCTION

At the point when data begins to stream in, all the attention turned to how the data is to be researched. On the off chance that it is completed adequately, the examination is thought to be done. Data availability joins the methodology of adjusting, coding and data door which ensures that exactness of data is expert.

By then the data was dismembered using substance dismemberment. For the quantitative canalization, the information was specifically accumulated from the surveys, which were by then coded and created for dismemberment. All the data was collected and the expert prepared a conclusion, recommendation and proposal for future study.

The data collected through above was accumulated and properly classified. The dissection of quantitative and qualitative data was carried out utilizing pattern examination and different measurable procedures, remembering general objectives of the research. To approve the hypothesis of the research, data has been investigated diagnostically to land at a positive or negative execution of the organization because of CRM practices. At long last, the discoveries

from the primary sources and also secondary assets were used keeping in view the research objectives and sub objectives to touch base at some distinct conclusion. The data investigation started with an exploratory component dissection to test the relationship between the watched variables and the underlying develops variables.

The sample was analyzed with different statistical techniques briefly mentioned hereunder:

Multiple Regression -

Albright, Winston and Zappe (2003, p. 548)[95] define regression as a "study of the relationship between variables". It is a useful tool in business since its application covers a variety of situations. Conversely, multiple regression includes more explanatory variables in the regression equation. Keller and Warrack (2003)[96] state that generally preference is for inclusion of as many independent variables as possible that are believed to affect the dependent variable. For the proposed research, all the elements of Market Orientation - location, accessibility, brand position - are independent variables, whereas the number of times people visit the brand shops and a particular brand shop are dependent variables and are affected by the independent variables.

[95]Albright, C.S. Winston, W.L. and Zappe, C. (2003) Data Analysis & Decision Making.2nd Edition. California: Thomson - Brooks/Cole.
[96]Keller, G. and Warrack, B. (2003) Statistics for Management and Economics. 6th Edition. California: Thomson - Brooks/Cole.

From above discussion multiple regression was chosen for analyzing the survey data in this study. The advantage of this model is that it allows the systematic consideration of a variety of variables in a single framework and can provide a quantitative assessment of the relative impact of the variables (Ghost andMcLafferty 1987). It is computerized for speedier, more flexible analysis, rapid testing (Curry and Moutinho 1992) and easier to interpret (Coates et al 1995). Moreover, according to Rogers (1992: page 6), this model has six key strengths as a tool:

- It provides an objective discipline for evaluation by different market analysts. This is important for successful delegation, particularly in the larger retail firms.

- From a strictly statistical point of view, the technique is said to have a known error rate. In theory, regression analysis does provide a plus and minus error factor but, in practice, it does not. This is because of the potential existence of important variables outside the model.

- The method has a particular value to retailers who have a segmented customer appeal since the key demographic variables relevant to the retailer are identified and analyzed by the technique.

- It provides an evaluation of existing store performances through residual analysis.

> Once developed, it is very easy to use.

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> Once developed, it is very easy to use.

(i) For developing the model in this study, existing service stations are statistically compared with measures of those variables expected to influence the level of performance and productivity, either positively or negatively. The result of this analysis is the development of a linear, statistical equation.

For the purpose of this study, this model will take the following form:

$$Y = f(M, S, L, C)$$

Where Y is performance or productivity measurements, and the M, S, L and C are independent variables represent the manager/owner characteristics, store characteristics, location characteristics and competition characteristics. Furthermore, the development of this model is based on two assumptions: (1) that the performance and

productivity of the service stations is significantly affected by the four characteristics mentioned above and (2) that these underlying factors can be isolated by systematic analysis.

There are two alternative approaches to implementing this model (Theil 1971 in Adam et al 1993 and Ghosh and Mc Lafferty 1987). A common procedure is to start with a large number of potential variables and then use "stepwise" regression or other similar methods to identify the variables most highly related to performance and productivity. The second approach is to first select a small number of variables likely to form a significant subset and directly enter these into the model to measure their relative impact on performance and productivity. The set of variables to be included can be ascertained from past studies or represent the analyst's judgment and management considerations (Ghosh and Mc Lafferty 1987). However, principal component or factor analysis techniques can also be used to select the variables to be included in the regression model.

In the researcher's opinion, using a statistical model approach was more useful than judgment because not every variable found significant in one survey or management considerations can also be significant in other surveys or organizations. This view was supported by Adam et at (1993). They said that the operation and maintenance of the statistical model should be relatively easy. Whereas, running a regression with so many variables would not have provided any

degrees of freedom (Hall 1994) because each time a variable is added to the equation, a degree of freedom is lost from the residual sum of squares (Norusis 1993). Due to this, the standard error may increase and the test of overall regression decreases and this will effect the "best" possible model for the test.

In the researcher's opinion, for this study the second approach using statistical method will be more appropriate to be used in this analysis. For that reason, two approaches were adopted. Firstly, variables were tested using bivariate correlation to identify or to seek guidance which one of the variables was most important and associated with performance and productivity. Secondly, a stepwise regression analysis was employed in order to explore the relationships between the significant variables and the performance and productivity measures. This approach was adopted from work done

7.2 BACKGROUND OF THE SAMPLE

Based on the research hypotheses, respondents from managers/owners of petroleum retailing industry were questioned with 30 questions to indicate their performance and productivity in the industry and their opinions about the overall industry as a whole. For the analysis of control variables (mostly demographic), all respondents were asked to indicate their demographic profiles. The summaries of the variables are shown in Table 7.1. Our final sample

consisted of atotal of 80 managers/owners made up of 48 owner/owner cum manager (which can be consider an entrepreneurs) and 32 managers which employed by the owners itself or other organizations.

The mean age of the sample as a whole is 40 years old; the youngest among the sample is 25 and the oldest being 56. Of the total sample, 74 or 92.5 per cent is male and only 6 or 7.5 per cent is female.

For the service stations, the mean age of the station is 5 years old. As previously mentioned, the sample came from the national oil company which have a very short history in the industry.

	Variables	Frequency	Percentage	Mean
1	Position in business			
	Owner/owner-cum-manager	48	60.0C	
	Manager	32	40.00	
2	Age of dealer			
	25-30	20	25.0C	40
	31-35	4	5.0C	
	36-40	10	12.50	
	4 1-45	22	27.50	
	40-50	20	25. 00	
	51-56	4	5.00	
3	Sex			
	Male	74	92. 50	
	Fomale	6	7.50	
4	Age of station			
	1-3 years	26	32.50	5
	4-6 years	30	37.50	
	7-9 years	14	17.50	
	10-11 years	10	12.50	
5	Ownership status			
	Sole ownership	70	87.50	
	Private Limited Company	2	2.50	
	Public Limited Company	6	7.50	
	Cooperative	2	2.50	
6	Initial Capital			
	MR100.000 - 130,000	38	47.50	MR256.450
	MR130.001 - 160.000	18	22.50	
	MR 160.001 - 190.000	18	22.50	
	More than MR 190.000	6	7.50	

Table 7.1 : Analysis Showing the Background of the Sample.

7.3 MULTIVARIATE CORRELATION AND REGRESSION ANALYSIS ON THE VARIABLES.

In order to explore the multivariate relationships between the performance measures and the surrogate variables, and to test hypotheses detailed in the research literature, the data were further subjected to multiple correlation and regression analysis. This

statistical technique was chosen because it allows the association of each independent variable with the performance indicator to be examined while controlling for the effects of the other independent variables. The multivariate regression equations presented below were calculated using the 'stepwise method', and the technique starts by regressing the variables with highest correlation against the dependent variable. A new independent variable is added or deleted at each step in order that the null hypothesis of no explanation can be rejected. The stepwise method was chosen because it is more susceptible to sample-specific error than the regular multiple regression. It has greater potential for capitalization on change and it can produce results that are specific to the sample employed (Hall 1994)[97].

When a regression analysis was run for VOLITRE with 0.05 as the limit for variable inclusion, only five variables entered the equation. However, when the limit was relaxed to 0.10, there are six variables was entered the step-wise regression equation. The results also improve R^2 from 0.84 to 0.86 and reduce the standard error from 0.78 to 0.75. From this test and discussion in section 7.3.1 above, the 0.10 level of significance was the selected level for the inclusion of significant independent surrogate variables. Furthermore, this level of significance was chosen because this study used a small sample and

[97]Hall, Graham (1994) "Factors Distinguishing Survivors From Failures Amongst Small Firms in the UK Construction Sector" Journal of Management. Studies Vol.31, No 5, September, pp 737-760.

the researcher was afraid that some of the important variables will be excluded if using the higher level of significance such as 0.01 or 0.05 level of significance (as shown from the test mentioned above). Moreover, a few retail researchers especially in petroleum retailing such as Ingene and Brown (1987) and Acar (1993) also used this level in their study.

Volume of litre sold of the service stations (LGVOLITRE)-

The present question to be addressed is: how well does each of the variables perform in predicting performance? This issue was examined via multiple regression equations in this section. Equation 1, below, is based on the 19 surrogate variables found to be statistically associated with volume of litre sold at the 0.01, 0.05 and 0.10 level of significance. Equation 1 which was contains the seven independent surrogate variables - BAYS, EXPEFROL, EXPMONTH, HSTAY, INVENTORY, OSHIPS and QUALITY is statistically significant and has a high adjusted R^2 value of + 0.91. This equation then explains 91 per cent of the variation of volume of litres sold among service stations in this study. The adjusted R^2 is felt to be abetter indicator than significance level as an accurate description of the value of the equation (Hand et al 1987). This also indicate the amount of dependent variable where the variation was not explained. In this case only 9 per cent. The values for R^2 and adjusted R^2 are large in this findings and if compared with other value reported in the literature,

the value is relatively very high. However according to Morphet (1991)[98], the high value for Redoes not mean that large errors will not occur. As mentioned earlier, after taking the logarithm of the dependent variable, there is no evidence of a lack of fit in the equation.

Those variables having a positive effect on volume of litres sold are number of bays (BAYS), expenditure per month (EXPMONTH), hours stay in business (HSTAY), inventory of non-fuel product (INVENTORY) and quality of services offered (QUALITY). One (HSTAY) of the positive variables is manager/owner variables, three (BAYS, EXPMONTH and INVENTORY) are firm variables and one (QUALITY) is a competitive variable. An increase in any of these variables is expected to increase the volume of litres sold. The amount of increase expected would differ for each variable on the basis of the regression coefficients.

The regression coefficients also show the numerical relationship between each variable and performance. They show the nature and magnitude of impact that each variable has on the performance measure. For example, the volume of litres sold model shows that a MR6 increase in expenses in a month is estimated to raise volume in litres sold by about 10,000 litres. Similarly, as mentioned earlier, an

[98]Morphet, Clive S (1990/1) "Applying Multiple Reg ression Analysis to the Forecasting of Grocery Store Sales: An Application and Critical Appraisal" The International Review of Retail. Distribution and Cos turner Research.Vol. I, No.3, pp 329-351.

increase of five hours in the business is expected to increase volume of litres by about 100 litres.

Equation 1:

Volume of litre sold by surrogate variables (all nineteen significant variables at p = 0.01, 0.05 and 0.10)

$$
\begin{aligned}
Y = {} & 9.34 + 0.26(\text{BAYS}) - 0.05(\text{EXPETROL}) + 0.00006\ (\text{EXPMONTH}) \\
& (24.99) \quad (6.41)^{***} \quad (-3.52)^{**} \quad (4.41)^{***} \\
& + 0.05\ (\text{HSTAY}) + 0.00004\ (\text{INVENTORY}) - 0.31\ (\text{OSHIPS}) \\
& (2.04)^{*} \quad (2.22)^{*} \quad (-4.23)^{***} \\
& + 0.18\ (\text{QUALITY}) \\
& (2.99)^{**}
\end{aligned}
$$

Multiple R = 0.96 Adjusted R^2 = 0.91

Standard error of the estimate = 0.26 n = 40

Note: For the equations the figures in the parentheses are t value

* Significant at the 0.05 level of significance

** Significant at the 0.01 level of significance

*** Significant at the 0.001 level of significance

It can be inferred from equation 1 that service stations which have sufficient number of bays, have adequate number of inventory ofnon-petrol product, have same level of quality with competitors, with maintaining the expenses, registered with proper legal entity and having an owner or manager which worked hard and have a few years experience in petroleum retailing will record the highest rates of volume of litre sold and can "stay" in this industry.

Volume of sales of non-fuel products of the service station (LGSALESNP)-

Equation 2 is based on the eighteen surrogate variables found to be statistically associated with volume of sales of non-fuel products a t the 0.01, 0.05 and 0.10 level of significance. This equation has a high adjusted R^2 value of + 0.67 and a standard error of 0.78. Five independent surrogate variables are stated in equation 2: AGEM, AGEST, BUILDUP, CAPITAL and STAFFNOW. This indicates that the equation presented above explains 67 per cent of the variance in sales of non-fuel product for service stations in this study.

Equation 2:

Volume of sales of non-fuel products by surrogate variables (all 18 atp = 0.01 , 0.05 and 0.10)

$$Y = 5.62 + 0.05(AGEM) + 0.10\ (AGEST) + 0.00008\ (BUILDUP) -$$
$$(6.81)(2.99)^{**} \qquad (2.41)^{*} \qquad (2.82)^{**}$$
$$0.000001\ (CAPITAL) + 0.12\ (STAFFNOW)$$
$$(-3.59)^{***} \qquad (2.80)^{**}$$

Multiple R = 0.84 Adjusted R^2 = 0.67

Standard error of estimate = 0.78 n = 40

Note: For the equations the figures in the parentheses are t value

* Significant at the 0.05 level of significance

** Significant at the 0.01 level of significance

*** Significant at the 0.001 level of significance

Average number of employee per year in business of service station (LCEMPGRO) -

In this measurement, the average annual increase in employment was used to measure the "success" of service station. This measurement was different from the previous two mentioned above, because this measurement was categorized into subjective measurement while the previous two were in objective measurement. The reason for using both measurement is to compare which one can describe the "best measurement" for the performance. In this analysis, the researcher

takes a set of number of employee per age of station as the dependent variables and included age of station as one of the independent variables. However, this situation may create

serious statistical problems. The following approach was developed to overcome the problem where some modification was made on the model. The new model is of the form:

$$\text{Log}Y = a + b_1X_1 + b_2X_2X_1 + b_3X_3X_1 + ...b_iX_iX_1$$

where X] is the age of station became the constant in the equation.

Equation 3 is based on the fifteen surrogate variables found to be statistically associated with LGEMPGRO at the 0.10, 0.05 and 0.01 level of significance. This equation is statisticallyIn this equation, the number of islands has the strongest effect, followed by the number of employees. Others, although are important but showed little effect on the equation. Number of employees again shows an effect in this model.

It can be inferred from equation 3 that to be "success" in this industry, the manager or owner must have enough experience before becoming the dealer, have sufficient capital to run the business, a n adequate number of islands and enough number of employees.

This study summarizes the findings and models empirically tested in equation 1, 2 and 3 and also shows the important variables (order entered) which had the greatest impact on the three performance measures. The regression equation characteristics of volume of litre sold indicate an R^2 of 0.91 which explains 91 per cent of the variation of volume of litre sold among service stations in this study. Using the same impact of the equation (based on which variable enters the equation first), there are seven variables in the equation. The variable with the greatest effect are number of bays (0.26), type of ownership (-0.31), amount of expensive per month (6.0×10^{-5}), amount of non-fuel inventory (4.0×10^{-5}), number of year experience in petroleum industry (-0.05) and so on in a descending order as shown in Table 7.2.

Equation 3: Average annual increase in employment by surrogate variables (15 variables at p = 0.01 , 0.05 and 0.10)

$$Y = 2.03 + 0.004\ (\text{EXPBEFORE}) + 0.018\ (\text{STAFFNOW})$$
$$(2.80)^{**} \qquad (9.16)^{***}$$
$$- 0.04\ (\text{ISLANDS}) - O.00000007\ (\text{CAPITAL})$$
$$(-7.04)^{***} \qquad (-3.12)^{**}$$

Multiple R = 0.90 Adjusted R^2 = 0.81

Standard error of estimate = 0.19 n = 40

Note: For the equations the figures in the parentheses are t value

* Significant at the 0.05 level of significance

** Significant at the 0.01 level of significance

*** Significant at the 0.001 level of significance

Performance measures	Significant variables
1. Volume of Litre Sold (STAY) Objective Measurement Adjusted R^2 = 0.91	1. BAYS (+) 2. OSHIPS (-) 3. EXMONTH (+) 4. INVENTORY (+) 5. EXPETROL (-) 6. QUALITY(+) 7. HSTAY (+)
2. Volume of Sales of non-fuel products (SURVIVE) Objective Measurement Adjusted R^2 = 0.67	1. STAFFNOW (+) 2. CAPITAL (-) 3. AGEM (+) 4. BUILDUP (+) 5. AGEST (+)
3. Average annual increase in employment (SUCCESS) Subjective Measurement Adjusted R^2 = 0.81	1. STAFFNOW (+) 2. ISLANDS (-) 3. CAPITAL (-) 4. EXPBEFORE (+)

Table 7.2 : Summary of variables in Performance of Service Station.

The regression equation characteristics of average growth in employment indicate an R^2 of 0.81 which explains 81 per cent of the variation of volume of litres sold among service stations in this study. Using the same impact of the equation (based on which variable enters the equation first), there are four variables in the equation. The variables with the greatest effect are number of years experience before become dealer (0.004), number of staffs (0.018), number of islands (- 0.04), amount of capital invested (7.0×10^{-8}) and number of years experience before become dealer (0.004).

From the above table, number of employees (STAFFNOW) and amount of capital invested (CAPITAL) are found to be important variables which can give impact on performance in both objective and subjective measurement. This finding supported the study done by Abdullah (1993) and Bates (1995), found that employees and capital was a highly significant determinant of firm survival. The important of both variables can be highlighted by comments of the respondents in this study. One respondent stated, "Normally, limited capital is our main problem and good employees was very hard to find." While another respondent commented, "Getting workers, and getting them to stay on, heads the list of problems". "My turnover is high and these workers only use this as a temporary stepping stone," agrees another dealer.

Finally, the research analysis presented in this study indicate that bothExternal and internal environment facing by petroleum retailingIndustry played significant roles in the performance of servicestations.

7.4 ANALYSIS OF HYPOTHESES TESTING

The set of hypotheses concerning the impact of independent variables on performance in retailing. There are thirteen hypotheses already developed earlier. The hypotheses are divided into two groups: the internal environmental factors (manager and store) and the external environmental factors (location and competition). The former reflect the "controllable factors" and the latter include "uncontrollable factors". One of the purpose of an exploration study was to establish a basis for future rigorous hypothesis testing. Using these constructs, we developed other regression models to examine the impact of internal and external environmental on performance. As mentioned earlier in this research, the first approach suggested byGhosh and Me Lafferty (1987) will be used in this section. The stepwise regression will be replaced by 2-stage regression in order to put all variables in one equation. The variables used in this section were selected by using judgment and management consideration and were found to be very important variables which impact on performance from the previous studies.

Hypotheses testing for internal environmental variables-

The relationship between firm performance and productivity and the independent variables (internal and external environmental variables) are modeled as follow:

$$Y_t = a + b_0 Yt^* + b_1 X_1 + b_2 X_2 + \ldots\ldots b_n X_n + e$$

Yt is the performance measure (VOLITRE, SALENP and EMPGRO). X_n are independent variable for the firm. Yt* is the subjective performance measure (managers/owners were asked the overallperformance measure (managers/owners were asked the overall performance of the firm in recent year by Likert scale 1 = very satisfactory to 5 = very unsatisfactory). Jacobson (1990) argues that models investigating the performance relationship may be misspecified because they fail to account for the impact of 'unobservable' effects on performance. In order to account for such 'unobservable' effects suggested by Jacobson (1990), the researcher includes the valuation from owners/managers themselves on their own stations. The researcher assumed that only owners and managers themselves knew 'exactly' about their own performance in absence of any other measures. These views was supported by Tan and Litschert (1995)[99].

[99]Justin and Litschert, Robert J. (1995)"Environment-Strategy Relationship and Its Performance Implications: An Empirical Study ofThe Chinese Electronics Industry" StrategicManagement Journal. Vol. 15, pp 1-20.

They said that the managers have knowledge of comparable firms' performance. In studies done by Birley and Westhead (1990), Adam et al (1993) and Tan and Litschert (1995),they included these type of variable because they believed the manager only had extensive first-hand knowledge of each store and its environment that could not be fully captured by other variables used in the model. On the other hand, the validity of this procedure has been established by previous studies.

In order to highlight the importance of the external and internal environmental effect on performance, the researcher entered the external and internal variables separately first and lastly both together in the model. By these approaches, the researcher estimated twelve regression models to investigate the relationship/hypotheses between these independent and dependent variables. Nine of theseHypothesis 1 predicted that number of year's experience before become a dealer will be positively related to firm performance. Results indicate that experience is positive but not significantly related to EMPGRO. However results also indicate that therelationship fails to reach statistical significance in both VOLITRE and SALENP model and is negatively related. While arguments have been presented from a positive and negative relationship in prior studies, our results suggesting a lack of relationship between experience and performance are perhaps due to the sample consisting of managers from the oil company which have experience in the industry but in managing the

poor performance stations. Moreover, most of the respondents have experience from unrelated fields such as experience in teaching, army, civil service and only a few have experience in small business. Furthermore, managing the service station is their first experience in business for the majority of the respondents.

Hypotheses	Independent Variables	Measures	Relationships hypothesized
H1	Managers	Year of experience before	Positive
H2	Store	Build-up area	Positive
H 3	Store	Inventory	Positive
H4	Store	Number of islands	Positive
H5	Location	Traffic density	Positive
H6	Location	Six locations	Positive

Table 7.3 Summary of Measures and Hypotheses

Hypothesis 2 predicted that buildup area of the service station will be positively related to performance. This finding fails to support this hypothesis because many service stations cannot fully utilize the area due to lack of capital or their plans was rejected by the oil company to develop further the surrounding area of the stations. One dealer said that, "My plan to increase services such as mart or garage was rejected because they (oil company) was not trust my capability to run

the project. My thinking was based on business thinking and the officer's (oil company's staff) thinking was based on administration".

Hypothesis 3 predicted that the amount of inventory will be related positively to firm performance. Given higher the amount of inventory will create more sale in petroleum and non-petroleum products. The oil company did not persuade their dealers to open the mini mart or other related services, whereas the other competitors already done. For the moment, the oil company itself did not have any concrete plan to increase sales by introducing more non-fuel products which was found very significant.

Hypothesis 4 predicted that number of islands will be positively related to performance. This variable is positive but fail to reach significance in the VOLITRE and SALENP models. However this variable is negatively and significantly related to EMPGRO model. In other words, as many islands provided by the dealer, the dealer has to employ more staff and at the end it will increase the overall cost. The turnover is one of the main problems faced by the dealer. One dealer explained, "The workers using station employment as a stepping stone while waiting for the more convenience jobs". Thus, our findings do not provide some support for Hypothesis 4.

Hypotheses testing for external environmental variables-

Hypothesis 5 predicted that number of traffics will be positively related to performance. Given that more number of traffics flow in front of the station, more change there will be patronizing the station. Thus, contrary to prior arguments regarding number of traffics (Jones and Simmons 1990), the results found here indicated that the number of traffics was negatively and significantly related to performance in SALENP model but not significant in the VOLITRE and EMPGRO. However, this finding supported the work done by Robinson and Hedsen (1973), who found that the traffic flow is not significant withperformance. Thus, our findings do not provide any support for Hypothesis 5.

Hypothesis 6 predicted that location will be positively related to VOLITRE, SALENP and EMPGRO. Our results indicate a negative relationship between location and all the performance. However, it fails to reach statistical significance. The lack of significance of this variable is perhaps due to the location types are broad surrogates. They may reflect (on average) different levels of competitive, intensity, different levels of trade population density or any number of other things. Future research should attempt to measure location variables better. Thus, our findings do not provide any support for Hypothesis 6.

A Summary of the findings for all hypotheses is presented in Table 7.4.

Hypotheses	volitre	s a l e n p	empgro
HI: EXPBEFORE	Not significant	Not significant	Not significant
H2: BUILDUP	Not significant	Not significant	Not significant
H3: INVENTOR	Not significant	Not significant	Not significant
H4: ISLANDS	Not significant	Not significant	Confirmed*
H5: TRAFFICS	Not significant	Confirmed**	Not significant
H6: LOCATION	Partly significant*	Not significant	Not significant

Table 7.4 Results of Hypotheses.

Note:

*** significant with level of 0.001

** significant with level of 0.05

* significant with level of 0.10

CHAPTER - 8

CONCLUSIONS

Refinery is an energy intensive industry, where electricity, steam, fuel oil & gas are used as the main sources of energy. Basic source of above forms of energy is hydrocarbon (petroleum oil) therefore optimization of energy is basically conservation of hydrocarbon, which in turn contributes in minimizing fuel and loss (OFL) and thereby improves profitability of the company. Most of energy optimization schemes need only systematic study and continuous effort of improvement without or with little cost involvement. Therefore it is recommended to implement energy optimization schemes in petroleum sectors in order to bring improvement in the profitability. Maximizing sells of products can increase profit; of course, the selling price must be higher than the production costs. However maximizing capacity utilization of the plants can maximize volumes of products.

Energy companies will need to build sound investor and analyst relationships and convince capital markets that they have clear strategies to succeed if they wish to avoid lower share prices. Retailing activities will separate from back office service provision as well as from network service provision.

Retail returns on electricity will probably be low, particularly if used as a loss leader by multi-product new entrants looking to maximize the lifetime value of their customers.

The oil and gas sector is fairly well developed in India, and is poised to contribute large share to India's energy basket over the next 15–20 years. A conservative estimate of 7 per cent growth in the Indian economy is expected to approximately double India's per capita energy consumption over the next 20 years. Since energy demand and economic growth are almost interlinked, the Indian oil and gas sector, which provides the country with a significant portion of its energy requirements, has been identified as a key metric that will drive future GDPgrowth.

To cope up with the increasing demand, the government has allowed 100 per centFDI in the oil and gas sector, enabling some large partnerships such as theUS$ 7.2 billion deal between BP and Reliance Industries. In order to further aid the development of the sector, the government introduces legislations such as the NELP to enable companies to bid for exploration rights, and encourage private sector participation. The participation of the private sector is expected to bring in monetary resources and technological capabilities, especially in the field of deep sea exploration while simultaneously reducing the dominance of PSUs in the country's competitive landscape.

This year's Union Budget is expected to have a mixed impact on the sector, as the government has increased on crude oil production by approximately 80 percent, thereby reducing its under recoveries. On the other hand, the government has also exempted the basic customs duty on the import of liquefied natural gas for power generation for two years, and made oil and gas pipelines eligible for viability gap funding, consequently aiding the midstream segment and thereby greatly benefiting the sector.

We've conducted an in-depth analysis of the Indian Petrol market, specifically retail market –with reference to a government policy and changes made in it over the years; the past and present consumption and production pattern of petrol in India and the quantity of import of petrol and its effect on balance of payment position of India.

The purpose is also to understand the present changes which are taking place in the Indian Petrol Market and the impact of these changes on the marketing strategies of the companies, and to finda way forward by taking Indian Oil Corporations a base. The study aims at a comprehensive examination of Indian Oil Corporation's marketing strategies and at critically analyzing the fitness of the strategies in the present scenario and also the long-term viability of its strategies.

The study also aims to trace the trends in the petroleum marketing in Indian context, i.e., to understand the changing dynamics of

marketing in the Indian petroleum industry, taking a case of Indian Oil Corporation.

The domain of customer relationship management stretches out into numerous zones of marketing and key choices. Its late conspicuousness is encouraged by the union of a few different paradigms of marketing and by corporate activities that have created around the subject of collaboration and the cooperation of authoritative units and their stakeholders, including customers. CRM alludes to a thoughtfully wide marvel of business action, and if the sensation of collaboration and joint effort with customers turns into the overwhelming paradigm of marketing practice and research, CRM can possibly rise as the overwhelming point of view of marketing. From the corporate execution perspective, CRM ought to not be misjudged to just mean a software result usage venture. Building relationships with customers is a principal business of each venture, and it obliges an all encompassing technique and methodology to make it fruitful.

From a scholastic viewpoint a paramount inquiry is whether CRM on the other hand relationship marketing will turn into a decently regarded, detached, and unique train in marketing. Our conviction is that it unquestionably has the potential, and we wish that it would happen in light of the fact that marketing will profit immensely from it. The lessons gained from past deliberations, both effective and

unsuccessful, of different marketing domains that have attempted to get to be trains give a decent guide of how to create CRM and relationship marketing into a different order. As an intercession system, it would be very alluring for relationship marketing and CRM researchers to sort out their own particular affiliation and their own particular insightful diary.

Customer Relationship Management is an exceptionally wide and broad field. This subject can't be managed in sufficient detail in a report of this size. It is the methodology of building long haul, trusting, win-win relationships with customers, distributors, dealers also suppliers. Nonetheless, we have constrained the extent of this report to Customer Relationship Management (CRM), and focused on the methodology of creating, keeping up, improving and commercializing customer relationships. The idea of CRM is gradually yet clearly developing in India, where on one hand numerous companies have taken a few activities and attained a ton of accomplishment around there, while others are awakening its difficulties, because of the developing business sector situation.

Customer Relationship Management is currently offering approach to 'Experiential marketing', where the experience stems right from the buy stage, to utilizing the item, to dumping the utilized item. Consequently, it is not only the unmistakable and immaterial profits, anyhow likewise the general experience which impact the buy choice.

Today, a brand's obligation is 'need satisfaction' as well as 'experience satisfaction'.

Defense' on delicate POL items. On the other hand, from the perspective of the fiscal deficit, the impact of a tax lessening without expanding the subsidy and the impact of expanding the subsidy without touching the tax rates would be the same for any given administered cost of these items. Also, contentions for diminishing the petro-subsidy bill brought about by the Central government or diminishing the sales tax rate on petro-items implies essentially shifting of fiscal deficit from the centra; to the state exchequers. I might want to contend that regardless of the fact that the fiscal deficit as an extent to GDP increments somewhat to keep up residential cost steadiness of POL items, we ought to permit that increment so as to minimize misfortunes. The fiscal deficit does not so much cause expansion or 'gathering out' of private speculation by raising the investment rates, in any case.

However, the policy of oil value deregulation even with climbing global cost of oil, would most likely have direct negative impacts on development, swelling and 'macroeconomic steadiness'. The extent that the inquiry of financing the additional deficit is concerned, the RBI (Reserve Bank of India) can buy new oil bonds and repurchase a percentage of the old oil securities in the auxiliary business and indirectly monetize it.

The macroeconomic effect of monetization would be precisely the same as a decrease in the Cash Reserve Ratio (CRR), which is continuously brought down under the current financial policy administration. In the event that monetization is as contended (by monetarists) inflationary, then that is genuine additionally for the increment in remote trade saves due to inflow of remote capital. For a developing economy, higher development rate guarantees higher tax revenue and also makes bigger fiscal space for more subsidies as an extent to GDP, making it supportable.

The analysis of the primary data reveals that the customers see a significant difference among the three public sector oil companies on the relationship factors. The mean scores for each company is listed below:

Company	N	REL	APP	REG	Trust	VAS	Average
1	243.0000	4.1255	4.1136	4.2428	4.1383	4.1512	4.1543
2	111.0000	3.8559	3.7784	3.8108	3.7730	3.7770	3.7990
3	132.0000	4.0909	4.0545	4.0833	3.9909	4.0455	4.0530

Table 8.1 Mean Scores of the Three Companies of CRM factors

While the customers see a significant difference among the three companies on all the impacting factors arrived as a result of the factor analysis. It implies that in the NCR region, the customer feels that the company 1 is considered better regulation. It means that whenever

new products filling to the enwer generation of fuels comes out in the market, customers will first try to explore the same with company 1.

Also company responds to the customer request more promptly compared to the other 2 companies. The effort made by the company on reliability, appearance, trust, regulation and VAS have been recognized well by the customers. Company 1 needs to focus more on the appearance dimension as the outlets are perceived to the lacking this dimension by the customer visiting company1. There is a need for the company 2 to work on all the five dimension compared to company 1 and 3. The reasons for visiting the outlets would be based on the ranking parameters which 76% of the customers have voded in favor of the the convenient travel plan. However, given the choice on their route, the customers would switch their preference in favor of another company. Company 3 is marginally lower on all the factor mean scores compared to company 1, and a small effort by the company shall push ahead of company 1 in the NCR region.

While the mean scores for overall company are different, however, looking at the mean scores of the individual retail outlet, it is observed that on all the five dimension, there is a difference among the outlets. Some of the outlets of company 1 are lacking compared to company 3 and also company 2 is ahead of the other companies on individual dimension. The conclusion therefore has to be seen on individual

parameters for each company, and company's can drawn inference about the needs of the customers.

Comparison of Indicators among Respondents of three Companies on various dimension clearly indicates, that the customers are able to differentiate the companies based on the factors of relationship. It was observed that the customers do not see significant difference in sales of the outlets and measures the company's performance based on the value they get from the company, rather than looking at the sales, which each outlets is doing.

Marketing has dependably been considered as a device for markets with blemished rivalry, where numerous sellers battle for consumers, they have separated items and heaps of advertising and sales promotion different costs may likewise predominate in these business sectors (Plamer, 2004). Selling of petrol in India was anything other than not about marketing.

Since, none of the attributes of Indian Petroleum Business of that time concurs with the qualities of markets with defective rivalry. For instance – amid that time, the petrol selling companies require not battle for consumers and they (petrol selling companies) advertised precisely the same item to the consumers (trademark of an item) and that too at the same cost. In other words, the history of marketing of petrol in India was characterized and described by great government

control what's more protectionism. The marketing capacity, as well as all parts of petroleum business, (investigation, refining, dispersion or selling) were strictly managed and ensured. At the same time, as of late a huge paradigm shift is taking put in the way petrol is constantly showcased (Anurag, 2007) .

The study additionally means to follow the patterns in the petroleum conveyance in Indian setting, i.e., to comprehend the changing motion of marketing and dispersion in the Indian petroleum industry, taking an instance of value and request nexus. The above study is simply a depiction of the sizzle that the petrol disseminating industry is experiencing, it is this critical change in the situation of petrol dissemination in India, which has pulled in a considerable measure of consideration of the policy producers in India. It's unverifiable that what the future sees yet one thing is beyond any doubt that marketing and dissemination of petrol is tranquil a testing errand for policy producers, Omcs and government.

Reinartz, Krafft,Hoyer (2004) Studied the Customer Relationship Management Process: Its Measurement and Impact on Performance and identified the goals of their study to: (1) to conceptualize and operationalize the process of CRM implementation, (2) to determine whether the implementation of CRM processes is positively linked to performance, and (3) to identify some key moderators of the relationship . They formalized CRM process in terms of three primary

dimensions: relationship initiation, maintenance, and termination so that results of CRM processes can be compared across companies and research studies. This index can also be employed as a guide for further research. On the other hand, their conceptualization highlights the importance of separating the three dimensions of CRM processes, because performance may vary at each stage. Mere examination of CRM processes at a general level does not capture the detailed nature of relationship management. A key goal of further research could be to examine factors that influence performance at each stage in more detail.

Keeping the above discussion in mind the framework developed by us in the current research was based on the five dimension, The CRM processes of the Public Sector oil companies were clearly flowing a common goal of Reliability, Appearance, Regulation, Trust and Value added services. The similarity therefore in our research and as proposed by earlier work on performance are collaborating. It was also observed that the performance of the company were varying at every state of these CRM process and on a overall scale doe not guide a general rule of relationship management. In order to have some linkage with the performance of the retail outlet and in turn with the company, it is necessary to build the relationships on these variables.

The earlier studies indicated that if a proper organizational structure and incentives are not in place, it may be difficult for CRM processes

to produce the desired effects. Thus, it is not enough for a company simply to implement CRM processes. It must organize itself and install a reward structure to support these processes. This also suggests that organization variables need to play a key role in further research efforts that attempt to understand the performance impact of CRM. The performance indicators also auggest that the two variables reliability and trust only contribute 17% to the performance and therefore, organizational efforts must be placed in order to identify and then understand the impact of other variables.

In this study we have outlined how companies can distinguish whether they can consolidate sponsorship with CRM. This study has highlighted the potential for CRM projects to be utilized to power sponsorship exercises better. Subsequently, there requirements to be extra research to inspect a various scope of issues. Any examination of the adequacy of CRM projects additionally needs to look into a scope of potential directing components including: the impression of truthfulness, association with reason and item, saw affect on the reason. Accordingly any trial would need to be sufficiently perplexing to look at or at any rate control for these elements.

The examination study demonstrates that CRM decidedly affect on understanding consumers furthermore focusing on, customer satisfaction and customer maintenance. Top to bottom meetings with vehicles companies have uncovered that in practice database

marketing encourages, customer understanding and focusing on, which is the base of CRM; Internet could bring upgraded customer satisfaction to CRM however coordinated intelligent marketing gave that customer private data is decently overseen, and henceforth certain level of customer maintenance.

Managerial ramifications could be drawn from this study. Firstly, to see consumers, which is a standout amongst the most critical parts of CRM, companies may apply machine database to get customer inclination data all the more proficiently, and consequently to target all the more precisely. What ought to be noted is that how to let customers control their data and how endeavor can shield it from outsiders need to be taken into cautious record with a specific end goal to ensure buyer security to manufacture their trust. What's more, companies can make coordinated relationship with consumers by using the data gathered, i.e., to give custom-made offerings to consumers as per their inclination also needs. In this manner customer satisfaction could be upgraded, which will bring about positive verbal and certain level of customer maintenance. Be that as it may, companies need to remember that CRM does not prompt customer loyalty constantly, different variables interfacing with loyalty, for example, purchaser purchasing conduct, need to be taken into record at the point when shaping CRM technique.

Speculations connected to CRM have been established in satisfaction/dissatisfaction hypotheses what's more speculations for customer whining conduct that has been proposed by customary advertisers. This study additionally examined models for customer satisfaction and whining conduct that analyze variables influencing customer relationship management. This study concentrates on the how to boost customer satisfaction for effective CRM on the grounds that it gives hints in respect to what managerial progressions may have prompted distinctive and more attractive practices, raising the issue of customer loyalty nearsightedness. This nearsightedness originates from accepting that purchaser conduct might be made and managed in and by itself without watchful respect to its underlying premise on the customer satisfaction side, restoring the long-standing marketing difficulty of demeanor and behavioral measures, and the amount mentality impact or anticipate conduct. This study additionally inspected studies that tended to the significance of customer dissentions that additionally go past the customer satisfaction idea and significantly all the more profoundly into the underlying speculations and models that endeavor to clarify why individuals might possibly be fulfilled. This study recommended the approaches to boost customer satisfaction, for example, enhancing customer loyalty and determining customer grumblings.

This study gives suggestions to both scholastics and practitioners. Future study will be required to explore mode of online customer

satisfaction that are proposed by Fournier and Mick (1999), including satisfaction-as-happiness, satisfaction-as-joy, what's more dissatisfaction-as-astonishment. Future exploration investigating buyer satisfaction of unadulterated play vs. multi-channel is likewise prone to be productive. Different issues that build the level of relationship between or inside online customers and businesses will likewise be a future exploration. Endeavors toward the successful determination of customer issues serve as the premise for long haul item and effective CRM.

The results of this research have several important implications for managers. The research provides a systematic outline of the different CRM activities that occur at retail outlets of oil companies and the various components of the relationships can be used by the managers to enhance the customer interactions. Thus, a company could use the approach to identify key activities that must be implemented to be successful, and an evaluation of the activities can provide a means for comparing their level of implementation with that of competitors.

One of the key issues in front of the organizations is to create value for their customer through the marketing process. Ambler (2000); Blattberg, Getz, and Thomas (2001); Keller and Lehmann (2001); Rust,Zeithaml, and Lemon (2000). Though the core purpose of the Enhancement of the services by the Company is to deliver value to the customers, yet, various market-oriented programs should do

everything in their power to enhance brand equity of the company and must take it to a level of customer equity. The introduction of various brands such as Club-HP, Servo-Premium, Speed etc which are brand equity of the company, needs to be taken to the level of customer equity. The company' offering on these brand basket is to translate the benefits at the customer level and customers must see the value offering on these brands in order to complete the process of their relationship with the companies..

CRM will be more technique driven, and therefore have the capacity to focus on what customer anticipates from the relationship. CRM technology will return to the part of a supporting instrument. The 'last take' for the CEOS will be that CRM is and might be a vehicle for social change and incorporation in the association. In short, a genuine CRM empowers a relationship perspective of the world that goes past customers, incorporates multi-parts and encourages corporate renaissance.

This study is exploratory in nature. The explanation behind this is the relative oddity of the item of the study (CRM activities) and the relative absence of key hypothesis portraying such activities. Consequently, there still are a lot of undiscovered exploration opportunities. With developing premium and huge ventures being made in CRM systems, a few exact opportunities will rise.

It is hard to measurably test the proposed CRM model in a genuine/false arrangement. The present model is in its available structure a calculated model. In any case, diverse parts of it would loan themselves well to quantitative tests. This is particularly important when it goes to the distinctive supporting conditions said in the model.

The main future opportunities for the sector include assessing the feasibility of using non conventional fuels such as coal bed methane, hydrogen and bio diesel. The sector must also lay greater focus on developing midstream infrastructure, with specific attention on city gas distribution networks, and the construction of

Strategic storage facilities as a safeguard against short term disruptions in fuel supply.

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THE QUESTIONNAIRE

Retail Outlet Name & Company: _____

Dear Manager/Owner,

I am conducting a research and my chosen topic is "Customer Relationship Marketing Practices in Indian Oil Corporation". Part of my research consists of a interview and survey of the leading dealers/managers of petroleum and the information provided by you will be used for academic purpose only. I would appreciate your responses to the following questions. In order that the results accurately represent all the stations, it is very important that each questionnaire be completed.

It would be greatly appreciated if you could cooperate by answering the questions and interview by myself or my representatives. It must be stressed that any information or assistance that you give will be kept confidential and will be used for academic purposes only. If you are unsure, please answer to the best of your ability. Please tick the box whenever applicable. Please write in Capital letters.

1. OBSERVATION DATA

Q 1. Number of islands

_____

Q2. Number of pumps

_____

Q3. Placement on the street

[ ] J Corner lot
[ ] Exposed center lot
[ ] Hidden center lot
[ ] Open space (No other building nearby)

Q4. Where is the station situated?

[ ] Business district (in town area or main street)
[ ] On a highway/motorway

[ ] Residential area
[ ] Near shopping center
[ ] Other,(specify)_____

Q5. The type of neighbourhood surrounding the station?
[ ] Business area
[ ] Mix of business and residential
[ ] Residential
[ ] Mix of residential and industry

Q6. The traffic speed infront of the service station?
[ ] Less than 20km/hour
[ ] Between 20 - 50 km/hour
[ ] Between 50 - 80 km/hour
[ ] More than 80 km/hour

2. BUSINESS BACKGROUND

Q 1 Who established this station?
[ ] Myself
[ ] My parent
[ ] Someone else
[ ] Owned by oil company or other organization
[ ] Other (specify):_____

Q2. Roughly, how many years of petroleum industry experience Before became the dealer?

_____ Years

Q 3 How much capacity of the petrol in your storage facilities?

_____ Liters

Q 4. How much inventory of non-fuel products in your station now?
MR_____

3. PERFORMANCE AND PRODUCTIVITY

Q 1. The commission that you received from the oil company for one liter sale of petrol for
Leaded _____
Unleaded _____
Diesel _____

Q 2. How much capital did you invest when you started in this Retail business?

MR_____

Q3. What is the estimated value of your business asset now?

MR_____

Q 4. What is the total sales of your business in a month?

MR_____

Q 5. What is the number of liters petroleum sold in a month?

MR_____

4. FACTORS RANKING - BUYING DECISION IN PURCHASING PETROL/DIESEL FROM THE PETROL PUMP.

	Factors	Rank
1	Convenient location of the outlet as per my travel plan	----------
2	Availability of Quality fuel/ branded fuels	----------
3	Quantity of fuel I want to purchase	----------
4	Ambience of the station	----------
5	Availability of Multiple modes of payment like (credit, debit or cash)	----------
6	Brand/ company name	----------
7	Availability of Value added services (Servicing, Stores etc)	----------

5. DEMOGRAPHIC DATA

Q 1. Your age: _____years

Q2 . Sex:
[ ] Male
[ ] Female

Q 3. Marital Status:
[ ] Married

[ ] Divorced widowed
[ ] Bachelorlnever married

Q 4. Your education _____

Q 5. Your profession _____

Q6 . We would welcome any further comments either about this questionnaire or about matters relating to your business.

_____

_____

_____

_____

_____

Q 7. Number of population where the station situated

_____

Q 8. Traffic volume(Average number of vehicles per hour)

_____

SERVICE STATION CHARACTERISTICS VARIABLES

Name of Variables	Definition
AGEM	Age of dealer (years)
AGEST	Age of station (years)
BAYS	Number of bays
BUILDUP	Size of build-up area (square foot)
CAPITAL	Total of investment (in first year)
EXPETROL	Experience in petroleum industry (years)
EXPBEFORE	Experience before became dealer (years)
EXPMONTH	Expenses per month
HSTAY	Number of hours spend in business
INVENTORY	Total of inventory of non-fuel products
ISLANDS	Number of islands
OSHIPS	Legal status of the business
QUALITY	Quality of services offered compared to nearest competitor
STAFFNOW	Number of present staff
VOLITRE	Number of litres sold